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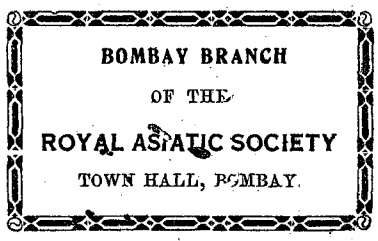

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CONCHOLOGIA ICONICA

OR,

ILLUSTRATIONS

OF THE

SHELLS OF MOLLUSCOUS ANIMALS.

87969

VOL. XX.

CONTAINING MONOGRAPHS OF THE GENERA

SOLEMYA.	TEREDO.	FISTULANA.	PTEROPODA.
MYA.	PEDICULARIA.	RISSOA.	ANCYLUS.
CLAUSILIA.	MYTELIMERIA.	SILIQUARIA.	ALYCÆUS.
CYLINDRELLA.	SAXICAVA.	CYRENA.	MARGARITA.
PUPA.	PUPINIDÆ.	SPHÆRIUM.	ROTELLA.
VANIKORA AND NERITOPSIS.	GASTROCHÆNA.	PLANORBIS.	STYLIFER.
KUPHUS.	ZYLOPHAGA AND NAVEA.	PLANAXIS.	AURICULA.
		VELORITA.	

BY

LOVELL AUGUSTUS REEVE, F.L.S., F.G.S.,

CORRESPONDING MEMBER OF THE NATURAL HISTORY SOCIETY OF WÜRTEMBERG, OF THE LYCEUM OF NATURAL HISTORY OF NEW YORK, OF THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, AND OF THE ZOOLOGICO-BOTANICAL SOCIETY OF VIENNA.

CONTINUED BY

G. B. SOWERBY, F.L.S.

117-f-4

"'Twas the Creator
He sought in every volume open to him,
From the small leaf that holds an insect's web,
From which ere long a colony shall issue,
With limbs and wings as perfect as the eagle's,
To the stupendous ocean, that gives birth
And nourishment to everlasting millions
Of creatures, great and small, beyond the power
Of man to comprehend, how they exist."

J. Montgomery.

LONDON:

L. REEVE & CO., 5 HENRIETTA STREET, COVENT GARDEN.

1878.

LONDON: PRINTED BY
SPOTTISWOODE AND CO., NEW-STREET SQUARE
AND PARLIAMENT STREET

PREFACE

TO

THE TWENTIETH VOLUME.

On the completion of this great work, a few words appear due to the Subscribers.

In the British Museum, England possesses a collection of shells—including that of the late Mr. Hugh Cuming, acquired by purchase in 1865—which for richness and completeness rivals all other collections in the world put together.

The 'Conchologia Iconica' was commenced by my late husband, Mr. Lovell Reeve, in 1843, as the exponent of these and other collections. At the time of his decease, in 1865, fifteen volumes of the work had been completed. Although these, containing as they do most of the more important Genera, would have been no inconsiderable contribution to Conchological science, still as many Genera remained unrepresented, it was thought desirable to continue the work to a point at which, for all practical purposes, it might be pronounced complete.

The literary conduct of the work was therefore entrusted to Mr. G. B. Sowerby, F.L.S., who had hitherto supplied the artistic portion.

His Royal Highness the late Prince Consort was amongst the earliest subscribers, and his subscription (for two copies) has been graciously continued by Her Majesty the Queen.

Many of the earlier subscribers have not lived to see the completion of the work, in the commencement of which they took a lively interest, but their subscriptions have been continued by members of the family, or have been replaced by other individuals.

To Her Most Gracious Majesty the Queen, and to the rest of the Subscribers, I beg to tender my most grateful acknowledgments, for the continued support which has enabled me to bring the work to what I trust will be deemed a satisfactory conclusion.

MARTHA REEVE.

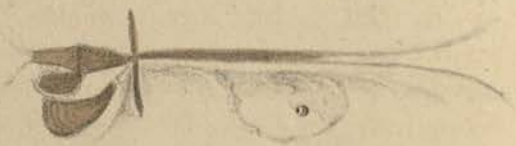
The Cottage, Gilston, near Harlow:
March 29, 1878.

MONOGRAPH

OF THE GENUS

SOLEMYA

"' Out of the deep th' Almighty King
Did vital beings frame.—*Watts.*



SOLEMYA.

Genus SOLEMYA, *Lamarck.*

Testa æquivalvis, inæquilateralis, transversè oblonga, utrinquè obtusa, epidermide corneo, valido, nitente fusco, ultra margines valvarum extenso induta. Cardo edentulus. Ligamentum partim internum post callum trigonum instructum. Impressiones duæ remotæ, subtrigonæ.

Shell equivalve, inequilateral, transversely oblong, obtuse at each end, covered with a strong shiny brown horny epidermis extending beyond the edges of the valves. Hinge without teeth, ligament partly internal, inserted behind a three-cornered callus; muscular impressions two, distant, subtrigonal.

To the four or five species previously known one has recently been described and well characterized by Mr. Edgar Smith, of the British Museum—namely, the *Sol. Parkinsoni* from New Zealand, which appears to be very distinct from the comparatively well-known Australian species. The northern parts of the United States present one or two species, which, with the familiar *Solemya Mediterranea*, complete the little list. The *Solemyæ*, like the *Solenes* and *Myæ*, are mud-burrowers, and from the construction of the foot and thinness of the shell leap with surprising activity. The shell is described as having a cardinal tooth in each valve, but the term seems quite inapplicable to the internal callus, behind which the ligament is inserted in a groove.

Species 1. (Mus. Brit.)

SOLEMYA OCCIDENTALIS. *Sol. testâ parvâ, angustâ, elongatâ; latere postico brevissimo, margine laterali obliquè truncato; latere postico attenuato, ad terminum acuminato.*

THE WESTERN SOLEMYA. Shell small, narrow, elongated; posterior side very short, lateral margin obliquely truncated; posterior side attenuated, acuminated at the end.

DESHAYES. MS. Brit. Mus.

Hab. ——?

The specimens in the British Museum appear young, and the shape of the callus and ligamental insertion not sufficiently developed to determine the distinctness of the species. It is, however, a larger shell than *Solemya Mediterranea*.

Species 2. (Figs. *a*, *b*, *c*, Mus. Brit.)

SOLEMYA MEDITERRANEA. *Sol. testâ soleniformi, elongatâ, radiatâ; latere postico angustiùsculo, brevissimo, obliquè truncato; latere antico elongato, versùs terminum ampliùsculo; callo cardinali angusto, arcuato, obliquè trigono; areâ ligamentiferâ post callum trigonâ, infrà lineatim productâ; ligamento partim etiam in sulcam obliquum linearem antè callum instructo.*

THE MEDITERRANEAN SOLEMYA. Shell soleniform, elongated, rayed; posterior side rather narrowed, very short, obliquely truncated; anterior side elongated, rather more ample towards the end; cardinal callus narrow, curved, obliquely trigonal; ligamental area behind the callus trigonal, linearly produced below; also a part of the ligament inserted in an oblique linear sulcus in front of the callus.

LAMARCK. Anim. s. Vert., ed. Deshayes, vol. vi. p. 125.

Solemya Solen, Salis Marchlius.

Hab. Mediterranean.

Species 3. (Mus. Brit.)

SOLEMYA BOREALIS. *Sol. testâ breviùsculâ, anticè latâ, subtruncatâ, posticè latissimo, ad terminum truncato; callo cardinali trigono crasso, lato; infrà bifurcato; impressione musculari anticâ elongatâ, subtrigonâ; epidermide crasso.*

THE BOREAL SOLEMYA. Shell rather short, anteriorly broad, rather truncated, posteriorly very broad, truncated at the end; cardinal callus trigonal, thick, broad; bifurcate below; anterior muscular impression elongated, subtrigonal; epidermis thick.

TOTTEN. Siliman's Journal, vol. vi. p. 124.
Solemya velum, Say.
Hab. North America.

Species 4. (Mus. Brit.)

SOLEMYA PARKINSONI. *Sol. testâ latâ, breviùsculâ, radiatim subsulcato, utrinquè latè truncato; callo cardinali valdè obliquo, arcuato, versùs terminum internum attenuato; ligamento partim etiam in sulcum elongatum verticalem antè callum instructo; impressione musculari latâ.*

PARKINSON'S SOLEMYA. Shell broad, rather short, radiately slightly grooved, broadly truncated at each end; cardinal callus very oblique, curved, attenuated towards the inner termination; ligament also partly inserted in an elongated vertical sulcus in front of the callus; anterior muscular impression broad.

GRAY. MS. in Brit. Mus. Descr. E. Smith, Zool. Erebus and Terror, p. 6.
Hab. New Zealand.

Species 5. (Mus. Brit.)

SOLEMYA AUSTRALIS. *Sol. testâ breviùsculâ, ad terminos obtusâ, æqualiter latiùsculâ; callo cardinali lato, trigono, infrà attenuato; ligamento etiam partim in foveam subquadratum ante callum instructo.*

THE AUSTRALIAN SOLEMYA. Shell rather short, obtuse at the ends, equally rather broad; cardinal callus broad, trigonal, attenuated below; ligament also partly inserted in a rather square pit in front of the callus.

LAMARCK. Anim. s. Vert., Deshayes ed., vol. vi. p. 124.
Hab. Australia.

MONOGRAPH

OF THE GENUS

M Y A

"To dive like buckets in concealed wells."—*Shakspeare.*

1a.

1.

1c.

2.

3a.

3b

4.

Sowerby del et Lith

Vincent Brooks Day & Son Imp

MYA.

PLATE I.

Genus MYA, *Linnæus.*

Testa æquivalvis, bimusculosa, plerumque ad extremitates hians, oblonga, epidermide rugato induto. Cardo edentulo, lamina ligamentifera trigona, excavata, projecta, in valva sinistra munito. Impressio pallii plusminusve sinuata.

Shell equivalve, bimuscular, generally gaping at each end, covered with a wrinkled epidermis. Hinge toothless, furnished in the left valve with a ligament-bearing, trigonal, hollow projecting plate. Pallial impression more or less sinuated.

Genus CRYPTOMYA, *Conrad* (included).

In the more restricted genus *Mya*, typified by *M. arenaria* and *M. truncata*, the siphons are long and produced, and covered with a coriaceous epidermis in continuation of that which covers the shell; but in the *Cryptomyæ* there is not the same epidermis-covered projection. But the construction of the hinge and general characters of the shell, and the mud-boring habits of the animal are alike in both groups; and no useful purpose is served in keeping them apart. The *Myæ* are few in number, and are principally inhabitants of Northern shores.

Species 1. (Mus. Sowerby.)

MYA ARENARIA. *Mya testâ ovatâ, solidâ, fulvâ, concentricè leviter rugatâ, utrinquè validè hianti; latere antico ventricoso, lato, latere postico cuneato, subdepresso, leviter angulato, ad terminum subobliquè truncato; laminâ ligamentiferâ in valvâ dextrâ magnâ, productâ; impressione pallii late et quadratim sinuato.*

THE SAND MYA. Shell ovate, solid, brown, concentrically lightly wrinkled, gaping strongly on each side; anterior side ventricose, broad, posterior side cuneate, subdepressed, slightly angular, rather obliquely truncated at the end; ligament-bearing plate in the left valve large, produced, pallial impression broadly and squarely sinuated.

LINNÆUS. Systema Naturæ.

Hab. British Coasts.

Species 2. (Mus. Brit.)

MYA ELLIPTICA. *Mya testâ tenui, ovatâ, compressâ, angustè hianti; latere antico breviusculo; latere postico propè marginem dorsalem obliquè depressâ, angulatâ, ad terminum obliquè truncatâ; margine ventrali rectiusculo.*

THE ELLIPTICAL MYA. Shell thin, ovate, compressed, narrowly gaping; anterior side rather short; posterior side obliquely depressed near the dorsal margin, angular, obliquely truncated at the end; ventral margin rather straight.

A. ADAMS (*Cryptomya*). MS. Mus. Brit.

Hab. ——?

More nearly equal-sided than *Mya Californica*, the anterior and not the posterior side being the shorter.

Species 3. (Fig. *a*, *b*, Mus. Brit.)

MYA CALIFORNICA. *Mya testâ compressâ, angustè hianti, ovatâ, pallidè rubescenti; latere antico inflato, rotundo, umbonibus subretrorsis; latere postico subangustato, breviusculo, ad terminum subtruncato, laminâ ligamentiferâ parviusculâ, sinu pallii impressionis parvâ.*

THE CALIFORNIAN MYA. Shell compressed, narrowly gaping, ovate, pale reddish; anterior side inflated, rounded, umboes leaning a little backwards; posterior side a little narrow, rather short, slightly truncated at the end; ligamentiferous plate rather small, sinus of the pallial impression small.

CONRAD ——? *Cryptomya.*

Hab. California.

Species 4. (Mus. Sowerby.)

MYA TRUNCATA. *Mya testâ oblongâ, ventricosâ, irregulariter rugatâ, posticè latè hianti; latere antico valdè inflatô, obliquè tumido, margine dorsali elevato, umbonibus angulatis, prominentibus, retrorsis, latere postico angustato; margine dorsali depresso, margine terminali truncato.*

THE TRUNCATED MYA. Shell oblong, ventricose, irregularly wrinkled, posteriorly broadly gaping; anterior side much inflated, obliquely tumid, dorsal margin elevated, umboes angular, prominent, leaning backwards, posterior side narrow; dorsal margin depressed, terminal margin truncated.

LINNÆUS. Systema Naturæ.

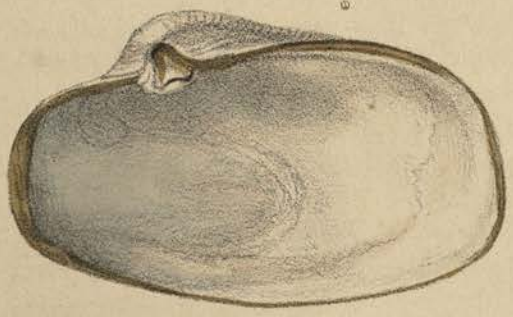
Hab. Coasts of Great Britain.

5a.

6a.

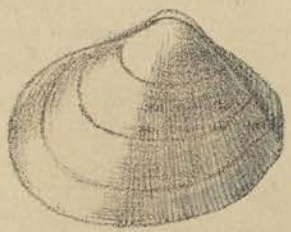
6b.

7.



8a.

8b.



5b.

Sowerby del et Lith

Vincent Brooks Day & Son Imp

MYA.

PLATE II.

Species 5. (Fig. *a*, *b*, Mus. Brit.)

MYA PHILIPPINARUM. *Mya testâ tenui, albâ, inflatâ, inæquilaterali, vix æquivalvi; latere antico lævi, ventricosissimo, margine dorsali declivi, margine ventrali inflato; latere postico brevi, striato, subcompresso, posticè cuneato, subangulato, vix truncato, margine dorsali declivi, margine ventrali sursum acclivi, umbonibus rotundis, retrorsis.*

THE PHILIPPINE MYA. Shell thin, white, inflated, inequilateral, scarcely equivalve; anterior side smooth, very ventricose, dorsal margin sloped, ventral margin much inflated; posterior side short, striated, a little compressed, posteriorly cuneate slightly angular, hardly truncated; dorsal margin sloped downwards, ventral margin sloped upwards; umboes rounded, leaning backwards.

A. ADAMS. MS. Brit. Mus.

Hab. Bay of Manilla.

Belonging to the group known as *Cryptomya*, and like several other species, having one half of its surface striated; the other smooth.

Species 6. (Fig. *a*, *b*, Mus. Brit.)

MYA SEMISTRIATA. *Mya elongato-ovatâ, tenui, albâ, latere antico inflato, lævigato; latere postico, usque ad medium tenuiter, posticè valdè striato, ad terminum angustato, angulato, post angulum, truncato, lævi.*

THE HALF-STRIATED MYA. Shell elongated, oval, thin, white, anterior side inflated, smooth; posterior side finely striated as far as the middle, strongly behind, narrow at the end, angular, truncated behind the angle, smooth.

HANLEY. Proc. Zool. Soc. 1850, p. 80.

Hab. —— ?

One of the *Cryptomya* group described by Mr. Hanley from a single valve in the collection of the late Mr. Cuming.

Species 7. (Mus. Brit.)

MYA PRÆCISA. *Mya testâ oblongo-subquadratâ, brevi altâ, concentricè irregulariter rugatâ, anticè inflatâ, latâ; posticè subangustatâ; latere postico brevi, latè truncato, hianti, margine elevato.*

THE SHORTENED MYA. Shell oblong-subquadrate, short, elevated, concentrically irregularly wrinkled, inflated in front, broad; posteriorly rather angular; posterior side short, broadly truncated, gaping, margin raised.

GOULD. United States Exploring Expedition.

Hab. Sitcha.

Although this shell is broader and shorter than the British *Mya truncata* is generally found, its distinctness from that species is matter of some doubt.

Species 8. (Fig. *a*, *b*, Mus. Sowerby.)

MYA CANCELLATA. *Mya testâ elongatâ, crassiusculâ, albidâ rugis concentricis numerosis, minutè undulatis, et striis radiantibus decussatâ; latere postico brevi, cuneato, ad terminum, truncato, circulariter hiant; latere postico inflato, obliquè producto, ad terminum rotundato.*

THE CANCELLATED MYA. Shell elongated, rather thick, whitish; decussated with numerous minutely undulated concentric wrinkles and radiating striæ, posterior side short, cuneate, truncated and roundly gaping at the end; posterior side inflated, obliquely produced, rounded at the end.

CONRAD. Annals of Natural Science of the Academy of Philadelphia.

Hab. California.

9a

10.

11.

12.

12b.

13.

3b

G. B. Sowerby del et Lith.

Vincent Brooks Day & Son Imp.

MYA.

PLATE III.

Species 9. (Fig. *a*, *b*.)

MYA MINDOROENSIS. *Mya testâ compressâ, albâ, latâ, lævigatâ, ovatâ; latere antico subinflato, rotundato, umbonibus parvis, submedianis; latere postico angustiùsculo, propè marginem dorsalem angulato, post angulum compresso, ad terminum latè truncato, margine dorsali brevi, depresso.*

THE MINDORO MYA. Shell compressed, white, broad, smooth, ovate; anterior side rather inflated, rounded, umboes small, nearly central; posterior side rather narrow, angular near the dorsal margin, compressed behind the angle, broadly truncated at the end, dorsal margin short, depressed.

ADAMS AND REEVE ——? MS. Mus. Cum. in Brit.

Hab. Isl. Mindoro.

A small shell of the *Cryptomya* group, differing from *Mya Californica* chiefly in the broad posterior truncation.

Species 10. (Mus. Brit.)

MYA DIVARICATA. *Mya testâ brevi, posticè latissimè hianti, subquadratâ, albâ, tenuissimè striatâ; latere antico semirotundo; umbonibus elevatis, subacuminatis; latere postico acutè angulato, perpendiculariter truncato, antè angulum undulatim rugato, divaricatim striato.*

THE DIVERGENT MYA. Shell short, with a wide posterior hiatus, rather square, white, very finely striated; anterior side half-round; umboes elevated, rather acuminated; posterior side acutely angular, perpendicularly truncated, with wavy wrinkles and divergent striæ in front of the angle.

A. ADAMS (*Cryptomya*). MS. Cum. Coll. in Brit. Mus.

Hab. Ceylon.

Species 11. (Mus. Brit.)

MYA DECURTATA. *Mya testâ ovatâ, albâ, lævigatâ, anticè subrotundâ; margine ventrali convexâ; latere postico acutè arcuatim angulato, angustato, perpendiculariter truncato; margine dorsali depresso, rectiùsculo, complanato.*

THE SHORTENED MYA. Shell ovate, white, smooth, anteriorly rounded; ventral margin convex; posterior side with an acute curved angle, narrow, perpendicularly truncated; dorsal margin depressed, rather straight, flattened.

A. ADAMS ——? MS. (*Cryptomya*), Cum. Coll. in Brit. Mus.

Hab. Isl. Luzon, Philippines.

Species 12. (Fig. *a*, *b*, Mus. Sowerby).

MYA ACUTA. *Mya testâ ovatâ, tenuiùsculâ, pallidè fulvâ, concentricè leviter rugatâ, utrinquè latè hianti; latere antico ventricoso, lato; latere postico cuneato, compresso subrostrato, subacuminato; impressione pallii acutè sinuato.*

THE ACUTE MYA. Shell ovate, rather thin, pale fulvous, concentrically lightly wrinkled, widely gaping at each end; anterior side ventricose, broad; posterior side cuneate, compressed, rather rostrated, rather acuminated; impression of the mantle roundly sinuated.

SAY. Wood's General Conchology.

Mya Japonica, Say (var.) MS. Mus. Sowerby.

Hab. North America; Chupoo, Japan.

The two specimens figured, the smaller Japanese, the larger North American, resemble each other and differ in the same degree from our common *Mya arenaria*. They are much more pointed at the end, and have a more rounded sinus in the pallial impression. These differences, however, may be rather varietal than specific.

Species 13. (Mus. Brit.)

MYA PRINCEPS. *Mya testâ albâ, tenui, ovatâ, ventricosâ; antè medium, medio et posticè radiatim striatâ; latere antico inflato, oblongo anticè lævigato, semiovato; umbonibus inflatis, retrorsis; latere postico brevi, angusto, obliquè augulato, antè angulum coarctato, ad terminum truncato; margine dorsali depresso, declivi.*

THE PRINCE MYA. Shell white, thin, ovate, ventricose; radiately striated from before the middle, and posteriorly; anterior side inflated, oblong, smooth anteriorly, semiovate; umboes inflated, recurved; posterior side short, narrow, obliquely angular; narrowed in front of the angle, truncated at the end; dorsal margin depressed, sloped.

A. ADAMS. Ind. (*Cryptomya*) MS. Cum. Coll.

Hab. Philippine Islands.

The largest and finest of the *Cryptomya* group.

MONOGRAPH

OF THE GENUS

CLAUSILIA

Nature, great parent!

How mighty, how majestic are thy works!—*Thomson.*

Lowerby del et Lith

Vincent Brooks Day & Son Imp

CLAUSILIA.

PLATE I.

Genus CLAUSILIA. *Draparnaud.*

Testa terrestris, plerùmque sinistralis, turrita, fusiformis, aperturâ plùs minùsve auriformi, intùs laminâ liberâ subspirali testaceâ clausâ, columellâ plerùmque biplicatâ.

Shell terrestrial, generally sinistral, turreted, fusiform, aperture more or less auriform, closed within by a free subspiral shelly plate, columella generally with two plaits.

The Clausium, shown at fig. 7, can only be seen *in situ*, by breaking the last whorl of the shell. It is of a subspiral form and turns on the edge of the inner part of the columella by means of a cartilaginous hinge. The animal can thereby retreat further within his shell and shut himself up more securely than by means of the ordinary external operculum of other shells. The species of this interesting genus of land shells are found everywhere in Europe, in China, and Chinese and Indian Islands, and generally in temperate districts. We have not been able to identify, among our 165 species taken principally from the British Museum and our own collections, half of the species enumerated by Pfeiffer, whose long and laborious studies, almost entirely confined to the air-breathing molluscs, have enabled him to present so complete a list. Our enumerations, however, include the great bulk of the species likely to be met with, and most of the more interesting and striking forms.

Species 1. (Mus. Sowerby.)

CLAUSILIA TRIDENS. *Cla. testâ pupæformi, medio subinflato, fusco, profundè perpendiculariter sulcato; anfractibus senis permanentibus, altis, ultimo elongato, angustato, infrà prolongato, profundè crimato, subtortuo; aperturâ magnâ, latâ, subquadratâ, supernè elevato, acuminato; margine albo, crasso, expanso; plicâ parietali crassâ, plicâ columellari parvâ, elevatâ, plicâ subcolumellari inconspicuâ.*

THE THREE-TOOTHED CLAUSILIA. Shell pupa-shaped, a little inflated below, brown, deeply perpendicularly grooved; whorls six permanent, high, last elongated, narrow, prolonged below, deeply notched, a little tortuous; aperture large, broad, rather square, raised above, acuminated; margin white, thick, expanded; parietal plait thick, columellar plait small, raised, under-columellar plait inconspicuous.

CHEMNITZ (Turbo). Pfr. Mon. Hel. II. 396.

Turbo costulatus. Wood.

Clausilia labiata. Sowerby.

Hab. Porto Rico.

Species 2. (Mus. Brit.)

CLAUSILIA BARTLETTI. *Cla. testâ subroseâ, brevissimâ, ventricosissimâ, solidâ, lævi; anfractibus quinis, tribus maximis, inflatis, ultimo angustato, prolongato; aperturâ subauriformi, labio externo supra medium sinuato; plicâ parietali magnâ, plicâ columellari subtrigonâ.*

BARTLETT'S CLAUSILIA. Shell somewhat pink, very short, very ventricose, solid, smooth; whorls five, three very large, inflated, last narrowed, prolonged; aperture subauriform, outer lip sinuous above the middle; parietal plait large, columellar plait subtrigonal.

A. ADAMS. Proc. Zool. Soc. 1866.

Hab. Eastern Peru.

Species 3. (Mus. Brit.)

CLAUSILIA BIPLICATA. *Cla. testâ fusiformi, ventricosâ, pruinosâ, tenuissimè striatâ; anfractibus novenis, inflatis; aperturâ oblongâ; margine albo, labio interno biplicato.*

THE TWO-PLAITED CLAUSILIA. Shell fusiform, ventricose, plum-coloured, very finely striated; whorls nine, inflated; aperture oblong; margin white, inner lip two-plaited.

MONTAGU. Brit. Biv.

Helix perversa. Mull.

Clausilia Montagui. Gray.

Hab. Germany, Spain, Great Britain.

Species 4. (Fig. *a*, *b*, Mus. Sowerby.)

CLAUSILIA FORMOSENSIS. *Cla. testâ fusiformi, ventricosâ, solidâ, fulvâ, vel pruinosâ; anfractibus un-*

decenis, usque ad medium et infrà gradatim crescentibus, ultimo rimato; aperturâ subauriformi, margine crasso, albo, labio interno triplicato.

The Formosa Clausilia. Shell fusiform, ventricose, solid, fulvous or plum-coloured; whorls eleven, gradually increasing to the middle and below, last notched; aperture somewhat ear-shaped; margin thick, white; inner lip with three plaits.

H. Adams. Proc. Zool. Soc. 1866, p. 317, t. 33, f. 7.

Hab. Island of Formosa.

Species 5. (Mus. Brit.)

Clausilia Phædusæ. *Cla. testâ altâ, subcylindricâ, flavidâ, lævigatâ, ad suturam rubro-lineatâ; anfractibus novenis, gradatim crescentibus, altis, obliquis, convexis, ultimo altissimo, longè rimato; aperturâ elongato-auriformi, intùs nigro marginatâ, plicâ parietali magnâ.*

The Phædusa Clausilia. Shell high, subcylindrical, yellow, smooth, with a red line at the suture; whorls nine, gradually increased, high, oblique, convex, last very high, with a long notch; aperture elongated, ear-shaped, black-edged within, parietal plait large.

A. Adams. Proc. Zool. 1872,

Hab. China.

Species 6. (Mus. Brit.)

Clausilia Taylori. *Cla. testâ dextrâ, albidâ, pyramidatâ, medio paulò inflatâ, rugosè liratâ; anfractibus undecenis, medio et suprà gradatim attenuatis, ultimo altissimo, infra medium carinato, descendenti, subattenuato, profundè rimato, sublaxato; aperturâ deltoideâ, magnâ, vix plicatâ, margine utrinque latè expanso.*

Taylor's Clausilia. Shell dextral, whitish, pyramidal, a little swelled in the middle, roughly ridged; whorls eleven, gradually attenuated from the middle upwards, last very high, keeled below the middle, descending, slightly attenuated, deeply notched, slightly uncoiled; aperture deltoid, large, scarcely plaited, margin widely expanded on each side.

Pfeiffer. Proc. Zool. Soc. 1861, p. 27, Pl. II.

Hab. ——?

A shell of remarkable beauty and singularity of form.

Fig. 7. Species 142. (Mus. Brit.)

Clausilia Macascariensis. I had figured the species on Plate XV. as *Clausilia Macarana*, not knowing that the latter name was only synonymous with the former. The later figures and description were taken from a specimen in which the back of the last whorl is more strongly and roughly plaited than usual. In the figure on this Plate we have shown a last whorl with the clausium *in situ*.

Species 8. (Mus. ——?)

Clausilia exilis. *Cla. testâ brevi, solidâ, fusiformi, pruinosâ, medio et infrà ventricosâ, latâ; anfractibus novenis, lævibus, inflatis, tenui fulvâ ad suturam marginatis, ultimo leviter rimato, infrà angustato; aperturâ perpendiculariter oblongâ, magnâ; margine albo, crasso, labio externo supra medium sinuato, tumido, plicâ parietali prominenti, plicâ columellari crassâ, magnâ.*

The narrow Clausilia. Shell short, solid, fusiform, plum-coloured, ventricose in the middle and below, broad; whorls nine, smooth, inflated, bordered with a narrow band at the suture; last slightly notched, narrowed below; aperture perpendicularly oblong, large; margin white, thick, outer lip sinuous above the margin, tumid, parietal plait prominent, columellar plate thick, large.

Adams. Proc. Zool. Soc. 1866.

Hab. Isle Formosa.

Species 9. (Mus. —— ?)

Clausilia oblita. *Sowerby*

The forgotten Clausilia.

An error has arisen from the first plate remaining undescribed long after its publication. The writer having mislaid his memoranda cannot now identify this shell, but names it provisionally as above.

II.

IV.

V.

VI.

VII.

IX.

X.

17a.

17b.

CLAUSILIA.

PLATE II.

Species 10. (Mus. ——? Copied.)

CLAUSILIA TORTICOLLIS. *Cla. testâ brevi, fuscâ, brevissimè cylindricâ; anfractibus striatis, rectis, ultimo elevato, rimato, soluto; aperturâ subquadratâ, margine interno suprâ, infrâ, et medio plicatâ.*

THE WRY-NECKED CLAUSILIA. Shell short, brown, very shortly cylindrical; whorls few, striated, straight, the last raised, notched, uncoiled; aperture rather square, with the inner margin plaited above, in the middle and below.

OLIVIER. Sowerby's Genera.

Hab. Syria.

Species 11. (Mus. Sowerby.)

CLAUSILIA ANATOLICA. *Cla. testâ sinistrali, fusiformi, pallidè griseo-fuscâ, medio et infrà inflatâ, supernè gradatim attenuatâ; anfractibus convexiùsculis, obliquis, densè laminatim costatis; ultimo coarctato, rimato, propè aperturam obliquè birugato; aperturâ magnâ, subquadratâ, margine expanso, tenui, labio externo intùs plicato, margine superiori perpendiculariter uniplicatâ; plicâ columellari elevatâ, obliquâ.*

THE ANATOL CLAUSILIA. Shell sinistral, fusiform, pale greyish-brown, inflated in the middle and below oblique, with close, laminar ribs; last contracted, notched, with two oblique ridges near the mouth; aperture large, rather square, margin expanded, thin, outer lip with an inner plait, upper margin with a single perpendicular plait; columellar fold raised, oblique.

ROTH. Küster, p. 233.

Hab. Anatol.

Species 12. (Mus. Sowerby.)

CLAUSILIA ELEGANS. *Cla. testâ subfusiformi, purpureo-fuscâ; costis albis, tenuibus, crebris sequentibus sculptâ; anfractibus 9, convexiùsculis, ultimo post aperturam contracto et plicato; aperturâ albidâ, subauriformi, margine expanso, reflexo, labio externo supernè incrassato, margine superiori perpendiculariter uniplicato, plicâ columellari latâ, obliquâ.*

THE ELEGANT CLAUSILIA. Shell rather fusiform, purple-brown, sculptured with white, narrow numerous consecutive ribs; whorls nine, rather convex, the last contracted and plaited beyond the aperture; aperture whitish, somewhat auriform, margin expanded, reflected outer lip thickened above, upper margin with a single perpendicular plait, columellar plait broad, oblique.

BIELZ. Rossm. Icon. iii. p. 64.

Clausilia intercedens, A. Schmidt.

Hab. Wallachia.

Species 13. (Mus. Sowerby.)

CLAUSILIA LAMINATA. *Cla. testâ lævigatâ, fusiformi, fusco-corneâ, obliquè sinistrali; anfractibus convexiùsculis; aperturâ subauriformi, infrà intùs plicatâ; plicâ superiori obliquâ, breviùsculâ; plicâ columellari obliquâ, latè laminatâ; margine aperturæ angusto, albo.*

THE LAMINATED CLAUSILIA. Shell smooth, fusiform, horny-brown, obliquely sinistral; whorls rather convex; aperture somewhat auriform, plaited within at the lower part; superior plait oblique, rather short; columellar plait oblique, broadly laminar; edge of aperture narrow, white.

MONTAGU. British Shells.

Helix bidens, Müller.

Clausilia lamellata, Leach.

Clausilia derugata, Jeffreys.

Clausilia lucida, Menke.

Clausilia granatina, Zeigler.

Clausilia Transylvania, Stentz.

Hab. Great Britain, and Europe generally.

Species 14. (Mus. Sowerby.)

CLAUSILIA EXARATA. *Cla. testâ gracilè fusiformi, grisescenti, laminis tenuibus crebris sculptâ; anfractu*

ultimo elongato, contracto, propè aperturam obliquè birugato, concavo; aperturâ parvâ, subauriformi, fulvâ, infrà intùs plicatâ, margine expanso, plicâ superiori parvâ, plicâ columellari elevatâ, arcuatâ.

THE PLOUGHED CLAUSILIA. Shell slenderly fusiform, greyish, sculptured with thin, close laminæ; last whorl elongated, contracted, with two oblique wrinkles near the aperture, concave; aperture small, rather auriform, brown, with an inner plait below, margin expanded; upper plait small; columellar plait raised, arched.

ZEIGLER. Pfeiffer Monog. ii. 449.
Clausilia callosa, Montford.
Clausilia denegabalis, Zeigler.
Hab. Dalmatia.

Species 15. (Mus. Sowerby.)

CLAUSILIA LÆVISSIMA. *Cla. fusiformi, corneâ, lævigatâ, sinistrali; anfractibus vix convexis, elevatis, ultimo compresso propè aperturam arcuatim rimato; aperturâ magnâ, biplicatâ, margine albo, reflexo, tenui.*

THE VERY SMOOTH CLAUSILIA. Shell fusiform, horny, smooth, sinistral; whorls scarcely convex, elevated, last compressed, with a curved notch close to the aperture; aperture large, with two folds, margin white, reflected, thin.

ZEIGLER. Pfeiffer Monog. ii. p. 439.
Clausilia glabrata, Mühlfeldt.
Clausilia lævigata, Mühlfeldt.
Clausilia decorata, Zeigler.
Clausilia superstructo, Parreyss.
Clausilia fulginea, Parreyss.
Hab. Croatia and Dalmatia.

Species 16. (Mus. ——? Copied.)

CLAUSILIA MOUHOTI. *Cla. testâ fusiformi, ventricosâ, tenui, tenuiter striatâ griseo-fuscâ, maculis albis fuseisque propè suturam notatâ, maculis albis medio anfractuum aspersâ; anfractibus apicalibus rotundis, medianis inflatis, penultimo elongato, medio contracto, ultimo infrà rimato; aperturâ magnâ, auriformi, plicâ superiori parvâ, albâ, columellâ biplicatâ, aperturæ margine reflexo, subexpanso.*

MOUHOT'S CLAUSILIA. Shell fusiform, ventricose, thin, finely striated, grey-brown, marked with white and brown spots near the suture, sprinkled with white spots in the middle of the whorls; apical whorls rounded, middle ones inflated, the last but one elongated; the last notched; aperture large, auriform, upper plait small, white, columella with two plaits, margin of the aperture reflected, slightly expanded.

PFEIFFER. Proc. Zool. Soc., 1875, p. 275, Pl. 36.
Hab. Loa Mountains, Camboja.

Species 17. (Figs. *a*, *b*, Mus. Sowerby and Brit.)

CLAUSILIA LUCOSTIGMA. *Cal. testâ fusiformi, angustâ, fuscâ, vel pallidè corneâ, medio subinflato; anfractibus 9, elevatis, liratis, ad suturam lineâ rubrâ maculis albis interruptâ ornatis; ultimo rimato, contracto; aperturâ albâ, subauriformi, intùs contracto, plicâ columellari latâ, margine superiori perpendiculariter uniplicato.*

THE WHITE-MARKED CLAUSILIA. Shell fusiform, narrow, brown, or pale horn, a little inflated in the middle; whorls nine, raised, ridged, with a red line at the suture, interrupted by white spots: the last notched, contracted; aperture white, somewhat auriform, contracted within, columella plait broad, upper margin with a single perpendicular plait.

ZEIGLER. Pfeiffer Monog. ii. p. 416.
Clausilia caudidilabris, Porro.
Clausilia opalina, Zeigler.
Clausilia latilabris, Mühlfeldt.
Hab. Italy.

Species 18. (Mus. Sowerby.)

CLAUSILIA CYLINDRICA. *Cla. breviusculâ, subcylindricâ, corneâ, tenuiter liratâ; anfractibus altis, rectiusculis, aperturâ perpendiculariter oblongâ, margine angusto, rotundo, albo, supernè uniplicato, plicâ columellari obliquâ, angustâ, elevatâ.*

THE CYLINDRICAL CLAUSILIA. Shell rather short; rather cylindrical, horny, finely ridged; whorls elevated, rather straight, aperture perpendicularly oblong, margin narrow, rounded, white, plaited above, columellar plait oblique, narrow, raised.

GRAY. MS. Pfeiffer Monog. iii. p. 391.
Hab. Himalaya Mountains.

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Sowerby del et lith.

Vincent Brooks Day & Son Imp.

CLAUSILIA.

PLATE III.

Species 19. (Mus. Sowerby.)

CLAUSILIA FALLAX. *Cla. testâ subventricosâ, fusiformi, liris lamelliformibus rugatâ, pallidè fulvâ; aperturâ subquadratâ, supernè uniplicatâ, margine externo supernè contracto, labio columellari bicalloso, plicâ columellari rectiùsculo, infrà truncato.*

THE FALLACIOUS CLAUSILIA. Shell rather ventricose, fusiform, wrinkled with lamelliform ridges, pale fulvous; aperture rather square, single-plaited above, outer margin contracted above, columellar lip with two callosities, columellar plait rather straight, truncated below.

ROSSMÄSLER ——? Pfeiffer, Monog. ii. p. 427.

Clausilia obscura, Parreys.

Clausilia decipiens, Zeigl.

Hab. Transylvania.

Species 20. (Mus. Sowerby.)

CLAUSILIA DISCOLOR. *Cla. testâ breviùsculâ, obesâ, lævigatâ, medio ventricosâ, versùs apicem angustatâ, corneâ, flammis fuscescentibus variegatâ, anfractibus* 10, *convexiùsculis, tribus apicalibus angustissimis; aperturâ latâ, plicâ superiori parvâ, inferiori super columellam obliquè elongatâ.*

THE TWO-COLOURED CLAUSILIA. Shell rather short, stout, smooth, ventricose in the middle, narrow towards the apex, horny, varied with brownish flames, whorls 10, rather convex, three apical very narrow; upper plait small, lower obliquely elongated upon the columella.

PFEIFFER. Monographia, ii. p. 416.

Hab. Isl. Cerigo.

Species 21. (Mus. Sowerby.)

CLAUSILIA PARVULA. *Cla. parvâ, tenui, fusiformi, lævi, purpureo-fuscâ; anfractibus altis, ultimo arcuatim rimato; aperturâ subauriformi, intùs infrà biplicato, margine tenui, rotundo albo, margine superiori uniplicato, plicâ columellari elevato, perobliquo, infrà truncato.*

THE LITTLE CLAUSILIA. Shell small, thin, fusiform, smooth, purple-brown; whorls elevated, the last with a curved notch; aperture rather auriform, with two folds within at the lower part, margin thin, round, white, upper margin with one fold, columellar fold raised, very oblique, truncated below.

STUDER ——? Pfr. Mon. ii. p. 462.

Clausilia minima, Parreys.

Hab. Germany and other parts of Europe.

Species 22. (Mus. Brit.)

CLAUSILIA CYLINDRELLIFORMIS. *Cla. testâ fusiformi, pallidissimè lilaceâ, longè rimatâ, leviter liratâ; anfractibus apicalibus fusciùs, medianis subinflatis; ultimo contracto, elongato, longè soluto, ad dorsum rugis duabus obliquiis, elevatis, elongatis quasi bicarinatâ; aperturâ remotâ, subovatâ, plicâ superiori tenui, plicâ columellari elevatâ, tenui, margine, expanso, tenui.*

THE CYLINDRELLIFORM CLAUSILIA. Shell fusiform, very pale lilac, with a long notch, slightly ridged; apical whorls brown, middle whorls a little inflated, the last contracted, elongated, with a long portion uncoiled, as it were double-keeled at the back with two oblique elevated wrinkles; aperture distant, rather oval, upper plait thin, columellar plait raised, thin, margin expanded, thin.

BOURGUIGNAT ——? Pfr. Mon. Hel. iv. p. 720.

Hab. Mount Lebanon, Syria.

Species 23. (Mus. Sowerby.)

CLAUSILIA BIELZI. *Cla. testâ dextrorsâ, ventricoso-fusiformi, tenui, corneâ, irregulariter et plerumque distanter liratâ; anfractibus convexis, medianis inflatis, elevatis, ultimo elongato, propè aperturam rimato; aperturâ perpendiculariter oblongâ, margine externo rotundo, lævi; plicis internis duabus, tenuibus, plicâ marginali superiori parvâ; plicâ columellari tenui, angulato.*

BIELZI'S CLAUSILIA. Shell dextral, ventricose-fusiform, thin, horny, irregularly and for the most part distantly ridged; whorls convex, the middle ones inflated, raised, the last elongated, notched near the aperture; aperture perpendicularly oblong, outer margin rounded, smooth; internal plaits two, thin, upper marginal plait small, columellar plait thin, angular.

PARREYS. Pfeiffer Monog. iii. p. 588.

Clausilia tenuis, Parreys.

Clausilia clathrata, Rossmäsler.

Hab. Transylvania.

Species 24. (Mus. Brit.)

CLAUSILIA ROLPHII. *Cla. testâ obtusè fusiformi, corneo fuscâ liris crebris sculptâ; anfractibus medianis ventricosis, ultimo elevato, infrà contracto, rimato in varicem spiralem ad dorsum desinentè; aperturâ subauriformi, margine externo supernè contracto, labio columellari plicato, plicis, unâ superiori, parvâ, duabus parvis submarginalibus, unâ magnâ laminatâ, obliquâ subintenui.*

ROLPHI'S CLAUSILIA. Shell obtusely fusiform, horn-brown, sculptured with close ridges; middle whorls ventricose, the last raised, contracted below, notched, ending in a spiral varix at the back; aperture rather auriform, outer margin contracted above; columellar lip plaited, plaits, one above small, two small near the margin, one large, laminated, oblique, partly internal.

LEACH ——? Pfeiffer Monog. iv. p. 762.

Clausilia Mortilleti, Dumont.

Clausilia biplicata, Parreys.

Clausilia satelles, A. Schundl.

Hab. Britain, France, &c.

Species 25. (Mus. Brit.?)

CLAUSILIA SWINHOEI. *Cla. testâ arcuato-rimatâ, fusiformi, solidâ, subventricosâ, castaneâ, striatâ; anfractibus* 10–12, *convexiùsculis, ultimo infrà turgide; aperturâ verticali, oblongâ ovali, angulo superiori rotundato; lamellis validis, unâ superiori, duabus columellaribus obliquis, haud elevatis.*

SWINHOE'S CLAUSILIA. Shell with a curved notch, fusiform, solid, rather ventricose, chestnut striated; whorls ten to twelve convex, the last turgid at the lower part; aperture vertical, oblong, oval, rounded at the upper angle, lamellæ strong, one upper, two oblique columellar, not raised.

PFEIFFER. Proceedings of the Zoological Society, 1865, p. 830, plate 46, f. 11.

Hab. Isl. of Formosa.

Species 26. (Mus. Sowerby.)

CLAUSILIA CRISPA. *Cla. testâ brevi, ventricosâ fumoso-fuscâ, anfractibus* 8, *maculis magnis albis castaneisque supernè propè suturam variegatis, convexis, tenuiter et densè liratis, ultimo propè aperturam rimato, infrà ad dorsum subspiraliter birugato; aperturâ albâ, disjunctâ, intùs contractâ, margine lato, laminatim expanso, plicâ superiori perpendiculari, plicâ columellari elevatâ.*

THE CRISP CLAUSILIA. Shell short, ventricose, smoky-brown, whorls eight, variegated above near the suture with large white and chestnut spots, convex, finely and closely ridged, the last notched near the aperture, with two subspiral wrinkles below on the back; aperture white, disjoined, contracted within, margin broad, spread in a layer, upper plait perpendicular, columellar plait elevated.

LOWE. Dr. Paiva, Monog. Moll. Madeira.

Hab. Madeira.

Species 27. (Mus. Sowerby.)

CLAUSILIA GASTROLEPTA. *Cla. testâ breviùsculâ, castaneâ, ad suturam albido variegatâ, tenuissimè liratâ, anfractibus* 9, *medianis ventricosis, ultimo attenuato, rimato, compresso, infrà birugato; aperturâ albâ, margine lato, latere externo suprà medium sinuatim incrassato, plicâ superiori elongatiùsculo, plicâ columellari lato, horizontali.*

THE SMALL-CHESTED CLAUSILIA. Shell rather short, chestnut, varied with white at the suture, very finely ridged, whorls nine, the middle ones ventricose, the last attenuated, notched, compressed, with two wrinkles beneath; aperture white, margin broad, outer side sinuously thickened above the middle, upper fold rather lengthened, columellar fold broad, horizontal.

ZEIGLER ——? Pfeiffer Monog. ii. p. 448.

Clausilia Freyerii, Küster.

Clausilia tabida, Küster.

Clausilia elongata, Cautraine.

Clausilia imbecilis, Parreys.

Hab. Dalmatia.

Species 28. (Mus. Sowerby.)

CLAUSILIA DELTOSTOMA. *Cla. testâ parvâ, angustâ, fuscâ, densè albiliratâ; anfractibus* 10, *convexiùsculis; ultimo rimato, obliquè attenuato, infrà birugato; aperturâ subdeltoideâ, biplicato, parviùsculo, subdisjuncto.*

THE DELTA-MOUTHED CLAUSILIA. Shell small, narrow, brown, with close, white ridges; whorls ten, rather convex; the last notched, obliquely attenuated, with two wrinkles below; aperture somewhat deltoid, with two plaits, rather small, a little disunited.

LOWE ——? Pfeiffer Mon. ii. p. 411.

Hab. Porto Santo, Madeira.

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Vincent Brooks Day & Son Imp

CLAUSILIA.

PLATE IV.

Species 29. (Mus. Sowerby.)

CLAUSILIA CONSPERSA. *Cla. testâ lævigatâ, corneâ, breviùsculâ, medio ventricosâ, ad suturam tuberculis minutis albis crenatâ; anfractibus* 10, *ultimo rimato, ad dorsum albo notato, infrà subvaricosâ; aperturâ magnâ, plicâ columellari latâ, subhorizontali; margine tenui, albo, lævigato.*

THE SPRINKLED CLAUSILIA. Shell smooth, horny, rather short, ventricose in the middle, crenated with minute white tubercles at the suture; whorls ten, the last notched, marked with white at the back, slightly varicose below; aperture large, columellar plait broad, nearly horizontal; margin thin, white, smooth.

PARREYSS. Rossmässler, Icon. iii.

Hab. Bosnia. Corfu. Dalmatia.

Species 30. (Mus. Brit.)

CLAUSILIA PLICATA. *Cla. testâ elongatâ, fusiformi, rubro-fuscâ, tenuiter liratâ, ad suturam plicis valide albis ornatâ; aperturâ oblongâ, biplicatâ, infrà subacuminatâ, margine tenuiter reflexo; ultimo anfractu rimato, infrà elongato, tumido.*

THE PLAITED CLAUSILIA. Shell elongated, fusiform, red-brown, finely ridged, ornamented at the sutures with strong white plaits; aperture oblong, with two plaits, somewhat acuminated below, margin thinly reflected; last whorl notched, elongated, tumid below.

DRAPARNAUD (Pupa). Conch. fluv. Pfeiffer Monog. ii. p. 479.

Clausilia maxima, C. grossa, C. elongata, C. pulverosa, Parreyss.

Clausilia rustica, Zeigler.

Helix muralis, Stüder.

H. plicosa, Ferrusac.

Clausilia plebeja, litigiosa, odontosa, anceps, consimilis, paradoxica, Zeigler.

Hab. Central Europe.

Species 31. (Mus. Sowerby.)

CLAUSILIA NIGRICANS. *Cla. testâ parvâ, lævigatâ, griseo-nigrescenti, breviùsculâ, anfractibus* 9, *convexiùsculis, aperturâ parvâ, biplicatâ, plicis margineque albis.*

THE BLACKISH CLAUSILIA. Shell small, smooth, blackish-grey, rather short, whorls nine, rather convex, aperture small, with two plaits; plaits and margin white.

PULTENEY. British Isles.

Causilia Marcilia, Risso.

Clausilia obtusa, Pfeiffer.

Clausilia didyma, Parreyss.

Clausilia bidentula, Mörch.

Clausilia elegantula, Parreyss.

Hab. Britain. Germany. France. Scandinavia.

Figure 32.

CLAUSILIA TRIDENS. Species I. Plate I.

Although this is a different variety and worth figuring for the difference, I am now convinced that *Cl. tridens* of Chemnitz, and *Cl. labiata,* Sowerby, *labiatus,* Montfort, are one.

Species 32 is postponed.

Species 33. (Mus. Sowerby.)

CLAUSILIA JAVANA. *Cla. testâ gracilè fusiformi, fuscâ, tenuissimè obliquè striatâ; anfractibus convexiùsculis, elevatis, obliquis, ultimo infrà attenuato, rimato; aperturâ magnâ, auriformi, margine reflexo, expanso, albido, lævigato, plicis superiori, columellarique parvis, albis, approximatis.*

THE JAVA CLAUSILIA. Shell slenderly fusiform, brown, very finely obliquely striated; whorls rather convex, raised, oblique, the last attenuated below, notched; aperture large, auriform, margin reflected, expanded, whitish, smooth, upper and columellar plaits small, white, approximate.

PFEIFFER. Monog. Helic. ii. p. 405.

Hab. Java.

This is an elegantly fusiform species with expanded aperture.

Species 34. (Mus. Sowerby.)

CLAUSILIA VENTRICOSA. *Cla. testâ fusiformi-subpyramidatâ, tenuissimè filostriatâ, fuscâ; anfractibus* 13,

obliquis, altis, medio et infrà ventricosis; suturâ profundâ, incisâ; ultimo anfractu rimato, anticè tumido; aperturâ subquadratâ, margine albo; plicâ superiori parvâ, plicâ columellari elevato, ferè horizontali.

The ventricose Clausilia. Shell fusiform, somewhat pyramidal, very finely thread-striated, brown; whorls thirteen, oblique, elevated, ventricose in the middle and under; suture deep, incised; last whorl notched, tumid anteriorly; aperture rather square, margin white; upper plait small, columellar plait raised, nearly horizontal.

Draparnaud. Con. fluv. Pfr. Mon. ii. p. 465.

Helix perversa, Sturm.

Clausilia latestriata, Parreyss.

Hab. Germany. France, &c.

Species 35. (Mus. Sowerby.)

Clausilia Philippiana. *Cla. testâ brevi, fusco-rubescenti, solidâ, ventricosissimâ, anfractibus* 5-6, *latis, altis, lævigatis, ultimo angustato, juxta aperturam lineatim rimato; aperturâ subauriformi, margine expanso; plicis superiori et columellari validis, approximatis.*

Philippi's Clausilia. Shell short, reddish-brown, solid, very ventricose, whorls five or six, broad, high, smooth; the last narrow, linearly notched close to the mouth; aperture rather auriform, margin expanded; upper and columellar plaits strong, approximate.

Pfeiffer. Monog. ii.

Hab. Birma.

A peculiarly obese shell of few whorls.

Species 36. (Mus. Sowerby.)

Clausilia lineolata. *Cla. testâ fusiformi, elongatâ, angustâ, corneo-fuscâ, liris albis tenuibus, crebris sculptâ; anfractibus* 13, *convexis, ultimo angustato, ad dorsum medio compresso, infrà tumido; aperturâ oblongâ, margine externo tenui, suprà medium sinuatim subcontracto, plicâ superiori brevissimo, plicâ columellari, elevato, subinterno.*

The linear Clausilia. Shell fusiform, elongated, narrow, horn-brown, sculptured with white, thin, close ridges; whorls thirteen; convex, the last narrow, compressed in the middle at the back, tumid below; aperture oblong, outer margin thin, sinuously contracted above the middle; upper plait very short, columellar plait elevated rather internal.

Held —— ? Pfeiffer Monog. iv. p. 778.

Hab. Germany. France, &c.

Species 37. (Mus. Sowerby.)

Clausilia Olivieri. *Cla. testâ cærulescenti, strigis undique corneis variegatâ, validè inæqualiter liratâ, elongato-fusiformi; anfractibus* 11, *supernè declivibus; suturâ profundâ; ultimo anfractu angustato, rimato, ad dorsum medio compresso, infrà tumido, validè rugoso; aperturâ fulvâ, angustè ovatâ, plicâ superiori parvâ, plicâ columellari elevatâ, intùs angulatâ.*

Olivier's Clausilia. Shell bluish, variegated with horny stripes and waves, strongly unequally ridged, elongated, fusiform; whorls eleven, sloped above; suture deep, last whorl narrow, notched, compressed in the middle at the back, tumid below, strongly wrinkled; aperture fulvous, narrowly ovate, upper plait small, columellar plait raised, angular within.

Roth. —— ? Küster, p. 233. Pfeiffer Mon. ii.

Hab. Rhode Island.

Species 38. (Mus. Sowerby.)

Clausilia lunularis. *Cla. testâ griseo-fuscâ, tenuissimè striatâ, subventricosâ; anfractibus* 8, *medianis inflatis, ultimo ad dorsum medio contracto; aperturâ subauriformi, margine tenui, expanso, reflexo; plicis superiori et columellari parvis, approximatis.*

The lunular Clausilia. Shell grey-brown, very finely striated, rather ventricose; whorls eight, the middle ones inflated, the last contracted in the middle at the back, aperture rather auriform, margin thin, expanded, reflected; upper plait and columellar plait small, approximate.

Pfeiffer. Monograph Heliceorum, iii. p. 608.

Hab. Eubœa.

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Sowerby del. et Lith.

Vincent Brooks Day & Son imp.

CLAUSILIA.

PLATE V.

Species 39. (Mus. Sowerby.)

CLAUSILIA ORTHOSTOMA. *Cla. breviter fusiformi fusco-purpureâ, lævigatâ; anfractibus* 10, *convexiùsculis, ad suturam crenulatis; ultimo anfractu rimato; aperturâ rectâ, oblongâ, margine albo, paulò reflexo, margine externo propè suturam calloso, plicis superiori et columellari tenuibus, approximatis.*

THE STRAIGHT-MOUTHED CLAUSILIA. Shell shortly fusiform, purple-brown, smooth; whorls ten, rather convex, crenulated at the suture; last whorl notched; aperture straight, oblong, margin white, a little reflected, outer margin callous near the suture, upper and columellar plait thin, approximate.

MENKE. Synopsis? Pfeiffer Mon. ii. p. 402.
Clausilia filiformis, Parreyss.
Clausilia tæniata, Zeigler.
Hab. Germany. Hungary, &c.

Species 40. (Mus. Sowerby.)

CLAUSILIA PLUMBEA. *Cla. testâ brevi, ventricosâ, purpureo-fuscâ, lævigatâ; anfractibus* 10, *convexis, supernè ad suturam albo tæniatis, medianis ventricosis, ultimo profundè rimato, ad dorsum depresso, infrà subcarinato, aperturâ albâ, latè biplicatâ, majusculâ, margine reflexo, expanso.*

THE PLUM-COLOURED CLAUSILIA. Shell short, very ventricose, purple-brown, smooth; whorls ten, convex, banded with white above at the suture, middle ones ventricose, last deeply notched, depressed at the back, subcarinated below; aperture white, with two broad plaits, rather large, margin reflected, expanded.

ROSMASSLER ——? Pfeiffer Mon. ii. p. 401.
Hab. Transylvania.

Species 41. (Mus. Sowerby.)

CLUSAILIA SEMIRUGATA. *Cla. testâ griseo-albidâ, lamellis tenuibus liratâ; anfractibus paucis, elevatis, medio lævigatis, ad suturam tæniâ fuscâ tuberculis albis interruptâ cinctis; ultimo rimato, obliquè angustato, ad dorsum compresso, infrà tumido, subcarinato; aperturâ subauriformi, margine tenui, plicâ columellari latâ, albâ.*

THE HALF-WRINKLED CLAUSILIA. Shell whitish-grey, ridged with thin lamellæ; whorls few, raised, smooth in the middle, belted at the suture with a narrow band interrupted by white tubercles, the last notched, obliquely narrowed, flattened at the back, tumid below, partly keeled; aperture rather auriform, margin thin, columellar plait broad, white.

ZEIGLER. Vert. Claus. p. 29.
Clausilia prunilia, Parreyss.
Clausilia pygmæa, Zeigler.
Clausilia nitida, Mühlfeldt.
Clausilia Chersonensis, Ferr.
Clausilia rugata, Parreyss.
Clausilia fasciolaris, Parreyss.
Hab. Dalmatia.

Species 42. (Mus. Sowerby.)

CLAUSILIA STRANGULATA. *Cla. testâ breviùsculâ, laminatim liratâ, griseo-fulvâ; anfractibus* 8, *convexiùsculis, ultimo attenuato, rimato, brevissimè soluto, ad dorsum coarctato, tumidè birugato; aperturâ oblongâ, margine tenui, subexpanso.*

THE STRANGLED CLAUSILIA. Shell rather short, ridged with laminæ, fulvous-grey; whorls eight, rather convex, the last attenuated, notched, very shortly uncoiled, pressed in at the back with two tumid wrinkles; aperture oblong, margin thin, rather expanded.

FERRUSSAC ——? Pfeiffer Mon. ii. p. 467.
Clausilia retusa, Parreyss.
Hab. Syria.

This curious little shell is pressed and knotted behind the aperture so as to give the appearance of strangulation.

Species 43. (Mus. Sowerby.)

CLAUSILIA VALLATA. *Cla. testâ brevi, subventricosâ, corneâ; anfractibus* 8, *convexiùsculis; ultimo rimato, ad dorsum compresso, propè aperturam varice albo, plicæformi vallatâ; aperturâ albâ, margine crasso, plicâ columellari crassâ, plicâ superiori tenui.*

THE WALLED CLAUSILIA. Shell short, subventricose, horny; whorls eight, rather convex; the last notched, compressed at the back, walled near the aperture with a white, plait-like varix; aperture white, margin thick, columellar plait thick, upper plait thin.

MOUSSON. Ms. Pfeiffer Monog. 1868, p. 453.
Clausilia vellata, Adams.
Hab. Epirus.

Species 44. (Figs. *a*, *b*, Mus. Sowerby.)

CLAUSILIA RUGOSA. *Cla. testâ parvâ, subventricosâ, tenuiter liratâ, fuscâ, anfractibus* 10, *convexis, ultimo angustato, aperturâ auriformi, margine plicisque albis, plicis unâ brevi superiori, unâ inferiori, propè marginem instructâ, unâ laterali propè marginem externum conspicuâ, unâ latâ, columellari, cum unâ parvâ infrà.*

THE RUGOSE CLAUSILIA. Shell small, rather ventricose, finely ridged, brown, whorls ten, convex, the last narrow, aperture auriform, margin and plaits white; plaits, one short upper, one placed near the lower margin, one lateral conspicuous near the outer margin, one broad, columellar with one small underneath.

Clausilia Reboudii, Charpentier.
Clausilia pyrenacea, Charpentier.
Clausilia crenulata, Ferrussac.
Clausilia perversa, Moquin.
Hab. France. Northern Italy.

Species 45. (Mus. Sowerby.)

CLAUSILIA TRISTAMI. *Cla. testâ elongato-fusiformi, purpureo-fuscâ, tenuiter liratâ, anfractibus* 14, *altis, ultimo rimato; aperturâ latâ, biplicatâ, margine albo, lævigato, angusto.*

TRISTAM'S CLAUSILIA. Shell elongated fusiform, purple-brown, finely ridged; whorls fourteen, high, the last notched; aperture broad, two plaited, margin white, smooth, narrow.

PFEIFFER. Proc. Zool. Soc. 1860.
Hab. Mount Atlas, Tunctan.

Species 46. (Mus. Sowerby.)

CLAUSILIA SHANGHAIENSIS. *Cla. testâ elongato-fusiformi, lævigatâ, politâ, corneâ; anfractibus* 12, *convexiùsculis, ultimo vix rimato, obliquè attenuato; aperturâ oblongâ, biplicatâ, margine crasso, læri, albo, reflexo.*

THE SHANGHAI CLAUSILIA. Shell elongated fusiform, smooth, polished, horny; whorls twelve, rather convex; the last hardly notched, obliquely attenuated; aperture oblong, with two plaits; margin thick, smooth, white, reflected.

PFEIFFER. Monograph iii. p. 410.
Hab. Shanghai, near China.

Species 47. (Mus. Sowerby.)

CLAUSILIA STIMPSONI. *Cla. testâ parvâ, albidâ, tenui, gracili, tenuiter liratâ; anfractibus* 10, *ultimo elongato; aperturâ parvâ, biplicatâ, fulvâ, margine crassiùsculo, plicâ columellari obliquè elevatâ, vix prominenti.*

STIMPSON'S CLAUSILIA. Shell small, whitish, thin, slender, finely ridged; whorls ten, the last elongated; aperture small, with two folds, fulvous, margin rather thick, columellar plait obliquely raised, scarcely prominent.

A. ADAMS. *Mart*, Ostas. Zool. ii. p. 83.
Hab. Japan.

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W. G. Sowerby del. et lith.

Vincent Brooks Day & Son Imp.

CLAUSILIA.

PLATE VI.

Species 48. (Mus. Hanley.)

CLAUSILIA BACILLUM. *Cla. testâ fusiformi, pallidè aurantiâ, lævi; anfractibus* 9, *convexis, medianis ventricosis, ultimis contractis; aperturâ oblongâ, albâ, supernè cuneatâ, plicâ superiori validâ; plicâ columellari elongatâ, obliquâ.*

THE WALKING-STICK CLAUSILIA. Shell fusiform, pale orange, smooth; whorls nine, convex, the middle ones ventricose, the last contracted; aperture oblong, white, covered above, upper plait strong; columellar plait elongated, oblique.

BENSON. MS. Hanley, Conchologia Indica, p. 12.

Hab. Nanclai, Khasi Hills.

There appear to be only two specimens of the species known.

Species 49. (Mus. Brit.)

CLAUSILIA PARREYSSII. *Cla. testâ subpyramidatâ, minutè interruptim liratâ, fusco-rubescenti, infrà medium ventricosâ; anfractibus* 9, *inferioribus altis, ad suturam tenuissimè plicatis; aperturâ magnâ, biplicatâ, labio externo suprà medium sinuato; plicâ superiori parvâ, incurvâ; plicâ columellari, altâ, latiùsculâ.*

PARREYSS' CLAUSILIA. Shell somewhat pyramidal, minutely interruptedly ridged, reddish brown, ventricose below the middle; whorls nine, the lower ones elevated, very finely plaited at the suture; aperture large, with two plaits; outer lip sinuated above the middle; upper plait small, curved inwards; columellar plait elevated, rather broad.

ZEIGLER. Pfeiffer, Monograph. II. p. 400.

Clausilia marmorata, Parreyss.

Clausilia cerea, Menke.

Hab. Carpathian Mountains.

Species 50. (Mus. Brit.)

CLAUSILIA ANGUSTATA. *Cla. testâ rimatâ, fusiformi, tenui, lævigatâ, conspicuè attenuatâ, apice acuto, suturâ albofilosâ; anfractibus* 10-11, *planulatis, ultimo infrà gibbo, striato; aperturâ vix obliquâ, oblongo-ovali; plicâ superiori compressâ, marginum non-attengenti, inferiori validâ, tortuosâ; plicis internis* 4, *inæqualibus; peristomate continuo soluto, albo, angustè reflexo.*

THE NARROW CLAUSILIA. Shell notched, fusiform, thin, smooth, conspicuously attenuated, with acute apex, suture white-threaded; whorls ten or eleven, flattened, last gibbous below, striated; aperture very slightly oblique; oblong-ovate; upper plait compressed, not touching the margin, lower plait strong, tortuous, inner plaits four, unequal; peristome continuous, detached, white, narrowly reflected.

BIETZ. Pfeiffer.

Hab. Transylvania.

Species 51. (Mus. Benson, Hanley.)

CLAUSILIA BULBUS. *Cla. testâ pupæformi, ventricosissimâ, castaneâ, rimatâ; anfractibus* 4, *duobus apicalibus parviusculis, tertio magno, alto, valdè inflato, ultimo alto, versùs aperturam angustato; aperturâ parvâ, auriculiformi, peritremate pallidè carneo, crasso, reflexo, columellâ biplicatâ.*

THE BULB CLAUSILIA. Shell pupiform, very ventricose, chestnut, notched; whorls four, two apical, rather small, third large, elevated much inflated, last elevated, narrow towards the aperture; aperture small, ear-shaped, peritreme pale flesh, thick, reflected, columella with two folds.

BENSON. Annals of Natural History, 1863.

Hab. Near Moulmein, Birmah.

Resembling *Clausilia Philippiana*, but with the whorls fewer, much more inflated and unequal.

Species 52. (Fig. *a*, *b*, Mus. Brit.)

CLAUSILIA VALIDA. *Cla. testâ subfusiformi, solidâ, pallidè corneâ, vel flavidâ, medio anfractuum latè unifasciatâ, tenuiter liratâ; anfractibus* 8-9 *altis, subcylindricis, medianis inflatis, ultimo altissimo, versùs aperturam attenuato; aperturâ magnâ, altissimâ auriformi, plicâ superiori elongatâ, plicis super-columellan unâ validâ, elongatâ, alterâ parvâ, inferiori.*

THE STRONG CLAUSILIA. Shell rather fusiform, solid, pale horny, or yellowish with a broad band in the middle of the whorls, finely ridged; whorls eight to nine, elevated, rather cylindrical, middle ones inflated, last very high, attenuated towards the aperture; aperture large, very high, auriform, upper plate elongated, plaits on the columella, one strong, elongated, the other small, lower.

PFEIFFER. Monographia Heliceorum III.

Hab. Lien-Kien.

Species 53. (Mus. Hanley.)

CLAUSILIA INSIGNIS. *Cla. testâ fusiformi, rimatâ, castaneâ, lævigatâ, propè suturam fasciâ pallidâ cinctâ; anfractibus* 9, *convexis, gradatim versùs terminos attenuatis; ultimo altissimo; aperturâ subtrigonâ, margine purpureo crasso; labio externo lato, supernè incrassato, sinuato; plicis superiori et columellari validis.*

THE WONDERFUL CLAUSILIA. Shell fusiform, notched, chestnut, smooth, girt with a pale band near the suture; whorls nine, convex; gradually attenuated towards the end; last very high; aperture nearly trigonal, margin purple, thick, outer lip broad, thickened and sinuated above; upper and columellar plaits strong.

GOULD. Proceedings of the Boston Society of Natural History.

Hab. Tavoy, Birmah.

Species 54. (Mus. Brit.)

CLAUSILIA MARGINATA. *Cla. testâ fusiformi, solidâ, fusco-corneâ, lævigatâ; anfractibus* 10, *ad suturam filo-marginatis, apicalibus* 6 *contractis, inferioribus ventricosis, ultimo rimato, aperturâ contractâ, elevatâ, margine crasso, labio externo ad medium sinuatim plicato, plicis superiori et collumellari crassis, magnis.*

THE BORDERED CLAUSILIA. Shell fusiform, solid, brown-horn, smooth; whorls ten, thread-bordered at the suture, the six towards the apex contracted, lower ones ventricose, last notched; aperture contracted, elevated, margin thick, outer lip with a sinuous plait in the middle; upper and columellar plaits thick, large.

ZEIGLER.

Clausilia Democletiana, Menke.

Clausilia bilabiata, Fr.

Clausilia vitrea, Bietz.

Hab. Transylvania.

Species 55. (Mus. Brit.)

CLAUSILIA BINOTATA. *Cla. testâ breviùsculâ, subpyramidatâ; pallidè succineâ; anfractibus* 9, *breviùsculis ad suturam denticulato-plicatis, apicalibus sensim contractis, medianis convexis, ultimo ad dorsum lineis pallidis semilunaribus duabus notato; aperturâ latâ, margine externo suprà medium sinuatim plicato, columellâ biplicatâ.*

THE TWO-MARKED CLAUSILIA. Shell rather short, rather pyramidal; pale amber; whorls nine, rather short, with tooth-like plaits at the suture, three apical, sensibly contracted; middle convex, last marked at the back with two pale semilunar lines; aperture broad, external margin with a sinuous plait above the middle; columellar with two plates.

ROSMÄSLER. Pfeiffer, Monograph. II.

Clausilia consentanea, Zeigler.

Clausilia bipustulata, Küster.

Hab. Istria.

Species 56. (Mus. Brit.)

CLAUSILIA ITALA. *Cla. testâ fusiformi, fusco-plumbeâ, medio ventricosâ; anfractibus* 9-10, *ad suturam denticulato-plicatis, apicalibus sensim contractis, medianis inflatis, ultimo infrà angustato, ad dorsum lineâ pallidâ flexuosâ notato; aperturâ subovatâ, labio externo intùs incrassato, plicis superiori et columellari superiori elongatis, inferiori parvâ.*

THE ITALIC CLAUSILIA. Shell fusiform, plum-brown, ventricose in the middle; whorls nine to ten, with tooth-like plaits on the suture, apical sensibly contracted, middle inflated, last narrowed below, marked with a flexuous pale line on the back.

MARTENS. Pfeiffer, Monog. II.

Clausilia alboguttulata, Meyner.

Clausilia punctata, Michaud.

Clausilia crenata, Menke.

Hab. Lombardy; Tyrol; Badia, &c.

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W. C. Sowerby del et Lith

Vincent Brooks Day & Son Imp

CLAUSILIA.

PLATE VII.

Fig. 53 *b*. (Mus. Benson.)

CLAUSILIA INSIGNIS. This shell is figured in Mr. Hanley's work on Indian Shells as a more slender variety of the species figured in Plate VI.

Species 57. (Mus. Brit.)

CLAUSILIA BILABIATA. *Cla. testâ brevi, fulvâ, lævi, anfractibus* 9, *brevibus, medianis ventricosis, ad suturam minutissimè plicatis; aperturâ subquadratâ, margine crasso, labio interno biplicato, labio externo duplicato, suprà medium plicâ dentiformi sinuato.*

THE DOUBLE-LIPPED CLAUSILIA. Shell short, fulvous, smooth, whorls 9, short, middle ventricose, very finely plaited at the suture; aperture rather square, margin thick, inner lip with two plaits, outer lip doubled, sinuated with a tooth-like plait above the middle.

WAGNER. Pfeiffer, Mon. II.
Clausilia reflexa, Zeigler.
Clausilia reflexilabris, Cautraine.
Clausilia labiocrassa, Mühlfeldt.
Clausilia planilabris, Rossmässler.
Hab. Dalmatia.

Remarkable for the thickness and double character of the outer lip.

Species 58. (Mus. Brit.)

CLAUSILIA SANDERII. *Cla. testâ fusiformi, obscurè roseo-albidâ, lævi, medio ventricosissimâ, anfractibus* 10-11, *apicalibus parvis, medianis inflatis, altis, ultimo rimato, versùs aperturam contracto, aperturâ magnâ, margine crasso; labio columellari validè biplicato, labio externo suprà medium sinuatim tumido.*

SANDER'S CLAUSILIA. Shell fusiform, dull rose-white, smooth, very ventricose in the middle; whorls 10–11, apical small, middle inflated, high, last notched, contracted towards the aperture; aperture large, margin thick, columellar lip strongly plaited, outer lip sinuously swelled above the middle.

KÜSTER. Pfeiffer, Mon. II.
Clausilia honorifica, Parreyss.
Clausilia magnifica, Parreyss.
Hab. Dalmatia.

Species 59. (Mus. Brit.)

CLAUSILIA SUMATRANA. *Cla. testâ solidâ, brevi, ventricosâ, plumbeâ et succineâ, anfractibus* 8, *supernè albo-fasciatis,* 6 *apicalibus convexis, brevibus, penultimo alto, ventricoso, ultimo alto infrà contracto; aperturâ auriformi, magnâ, biplicatâ, labio externo medio tumido, plicâ columellari obliquè tortuâ.*

THE SUMATRA CLAUSILIA. Shell solid, short, ventricose, plum-coloured and amber; whorls 8, white-banded above, 6 apical convex, short, penultimate high, ventricose, last high, contracted below; aperture auriform, large, biplicate, outer lip swelled in the middle, columellar plait obliquely tortuous.

MARTENS. Berlin Akad. Pfeiffer, Mon. VI.
Hab. Island of Sumatra.

Species 60. (Mus. Benson.)

CLAUSILIA OVATA. *Cla. testâ brevi, ventricosâ, fumoso-castaneâ, lævigatâ, solidâ, anfractibus* 6, *supernè albo-fasciatis, duobus apicalibus parvis, brevibus, tribus, medianis altis, inflatis, ultimo altissimo, rimato, versùs aperturam subcontracto; aperturâ auriformi, margine purpurascens, crassiùsculo, rotundo, plicâ superiori parvâ, plicâ columellari elevatâ, tenui, parvâ.*

THE OVATE CLAUSILIA. Shell short, ventricose, smoky-chestnut, smooth, solid; whorls 6, white-banded above, two apical small, short, three middle high, inflated, last very high notched, a little contracted towards the aperture; aperture auriform, margin purplish, rather thick, rounded, superior plait small, columellar plait raised, thin, small.

BLANFORD. Journal of Asiatic Society of Bengal, 1872.
Hab. Tonghu, Birmah.

Species 61. (Mus. Benson.)

CLAUSILIA LOXOSTOMA. *Cla. testâ fusiformi, fusco-corneâ, lævigatâ; anfractibus* 9, *ad suturam plicatis, medianis ventricosis, altis, ultimo alto, infrà subangustato, rimato; aperturâ magnâ, obliquè subtrigonâ, margine reflexo, albo, planiùsculo, labio externo supernè sinuatim tumido, labio interno biplicato.*

THE OBLIQUE-MOUTHED CLAUSILIA. Shell fusiform, horn-brown, smooth; whorls 9, plaited at the suture, the middle ones ventricose, high, last high, rather narrowed below, notched; aperture large, obliquely subtrigonal, margin reflected, white, rather flat, outer lip sinuously swelled above, inner lip biplicate.

BENSON. Pfeiffer, Mon. II. p. 404.

Clausilia Bengalensis, Busch.

Hab. Bengal.

Species 62. (Mus. Hanley.)

CLAUSILIA FUSIFORMIS. *Cla. testâ flavidâ, minutè striatâ, fusiformi, ventricosâ; anfractibus* 8, *convexis, versùs apicem gradatim angustatis, medianis ventricosis, altis, ultimo angustiori, altissimo; aperturâ albâ, auriformi, margine crasso, labio externo propè suturam sinuatim angustato, medio et infrà tumido; labio interno biplicato, plicâ columellari alto, planato.*

THE FUSIFORM CLAUSILIA. Shell yellow, minutely striated, fusiform, ventricose; whorls 8, convex, gradually narrowed towards the apex, middle ventricose, high, last narrower, very high; aperture white, auriform, margin thick, outer lip sinuously narrowed near the suture, tumid in the middle and below; inner lip with two plaits.

BLANFORD. Contributions to Indian Malacology, v. 1865, p. 16.

Hab. Arakan Mountains.

Species 63. (Mus. Brit.)

CLAUSILIA CYCLOSTOMA. *Cla. testâ fusco-rubescenti, tenuiter liratâ, brevi, fusiformi; anfractibus* 9, *apicalibus parvis, medianis altis ventricosis, ultimo altissimo, rimato, ad dorsum obliquè bivaricoso; aperturâ latâ, rotundâ, margine albo, crasso, latè reflexo, plicis labii interni parvis, acutis.*

THE ROUND-MOUTHED CLAUSILIA. Shell reddish-brown, finely ridged, short, fusiform; whorls 9, apical small, middle high, ventricose; last very high, notched, with two oblique varices at the back; aperture broad, rounded, margin white, thick, broadly reflected, plaits of the inner lip small, acute.

PFEIFFER. Monographia Heliceorum, IV. p. 784.

Hab. Central America.

Species 64. (Mus. Brit.)

CLAUSILIA CATTAROENSIS. *Cla. testâ subpyramidatâ, medio paulò inflatâ, plumbeâ et castaneâ; anfractibus* 11, *albo, marginatis, apicalibus* 6, *parvis, brevibus, medianis latioribus, ad laterâ rectiùsculis, ultimo alto, versùs aperturam vix angustato; aperturâ magnâ, subquadratâ, plicâ superiori validâ, plicâ columellari altâ, obliquâ, plicis internis supernè duabus linearibus, infrà columellam, unâ parvâ, obliquâ.*

THE CATTARO CLAUSILIA. Shell somewhat pyramidal, a little inflated in the middle, plum-coloured and chestnut; whorls 11, white-bordered, 6 apical small, short, middle wider, rather straight at the sides, last high, scarcely narrowed towards the aperture; aperture large, subquadrate, upper plait strong, columella plait high, oblique, inner plaits two linear above, one small, oblique, below the columella.

ZEIGLER. Pfeiffer, Monog. II. 437.

Clausilia lævigata, Mühlf.

Clausilia lesinacensis, Parreyss.

Hab. Cattaro.

Species 65. (Mus. Hanley? copied.)

CLAUSILIA TURRITELLA. *Cla. testâ flavidâ, angustissimâ, elongatâ, pyramidatâ; anfractibus* 14, *lentè crescentibus, convexiùsculis, ultimo oblongo; aperturâ oblongo-subquadratâ, suprà columellam uniplicatâ, columellâ rectâ.*

THE TURRITELLA CLAUSILIA. Shell yellow very narrow, elongated, pyramidal; whorls 14, slowly increasing, rather convex, last oblong; aperture oblong, rather square, with a single plait over the columella, columella straight.

SOWERBY.

Clausilia cylindrica, Hanley, as of Gray, MS.

Hab. Landour.

This shell seems so different from the type specimens in the Brit. Mus. that after figuring it I have felt compelled to give it a new name.

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W. G. Sowerby del. et lith.

Vincent Brooks Day & Son Imp.

CLAUSILIA.

PLATE VIII.

Species 66. (Mus. Brit.)

CLAUSILIA SUCCINEATA. *Cla. testâ parvâ, brevi, subfusiformi, obscurè succineâ, tenuissimè striatâ, anfractibus* 10, *apicalibus* 5 *parvis, attenuatis; medianis ventricosis, ultimo elongato, ad dorsum plicato; aperturâ ovatâ, plicâ superiori subdistanti, plicâ columellari magnâ; labio externo suprà medium dentiformi, tumido.*

THE AMBER CLAUSILIA. Shell small, short, subfusiform, dull amber, very finely striated, whorls 10; apical 5 small, attenuated, middle ventricose, last plaited at the back; aperture ovate, upper plait rather distant, columellar plait large; outer lip with a tooth-like swelling above the middle.

ZEIGLER. Pfeiffer, Monograph. II.

Clausilia nympha, et *C. striatocollis*, Parreyss.

Hab. Croatia.

Species 67. (Mus. Brit.)

CLAUSILIA FIMBRIATA. *Cla. testâ brevi, ventricosâ, fusiformi, albidâ, lævigatâ; anfractibus* 10, *ad suturam fimbriatis, convexis, apicalibus sensim attenuatis, medianis magnis, ultimo altiusculo, propè aperturam contracto, ad dorsum propè marginem tumido; aperturâ subquadratâ, labio externo suprà medium sinuatim tumido, subdentato; plicâ columellari latâ, plicâ superiori parvo.*

THE FRINGED CLAUSILIA. Shell short, ventricose, fusiform, whitish, smooth; whorls 10, fringed at the suture, convex, the apical ones notably attenuated, middle large, but rather high, contracted near the aperture, tumid near the margin at the back; aperture rather square, outer lip sinuated with a tooth-like swelling about the middle, columellar fold broad, upper fold small.

MUHLFELDT. Pfeiffer, Mon. II. p. 399.

Clausilia saturata and *Cl. phalerata*, Zeigler.

Clausilia virens, Mühlfeldt.

Clausilia styriaca, Parreyss.

Hab. Illyria—Croatia.

Species 68. (Mus. Brit.)

CLAUSILIA BLANDA. *Cla. testâ subpyramidatâ, lævigatâ, pallidè succineâ, semipellucidâ; anfractibus* 10, *apicalibus tribus parvis, convexis, alteris subventricosis, ad laterâ rectiusculis; ultimo alto; aperturâ subovatâ, margine albo, tenuiusculo, labio externo propè suturam unidentato, labio interno lato, plicâ superiori parvâ, plicâ columellari latâ, inferiori parvâ, validâ.*

THE BLAND CLAUSILIA. Shell rather pyramidal, smooth, pale amber, semi-pellucid; whorls 10, three at the apex small, convex, the others rather ventricose, rather straight at the sides, last high, aperture rather ovate, margin white, rather thin, outer lip with a tooth near the suture, inner lip broad, upper plait small, columellar plait broad, lower small, strong.

ZEIGLER. Pfeiffer, Mon. II. p. 448.

Clausilia castanea, Küster.

Clausilia strigata, Mühlfeldt.

Hab. Dalmatia.

Species 69. (Mus. Theobald? copied.)

CLAUSILIA MASONI. *Cla. testâ fusiformi, fuscâ, gracili, anfractibus* 10, *medianis et inferioribus altis, obliquè ventricosis, propè suturam depressis, ultimo elongato, attenuato, suprà aperturam profundè rimato; aperturâ maximâ, margine effuso, labio interno supernè triplicato.*

MASON'S CLAUSILIA. Shell fusiform, brown, rather slender, whorls 10, middle and lower high, obliquely ventricose, depressed near the suture, last elongated, attenuated, deeply notched above the aperture; aperture very large, margin effuse, inner lip three-plaited above.

THEOBALD. Journal of Asiatic Society of Bengal, v.

Hab. Near Tonghoo mountains, Pegu, and Martaban.

Species 70. (Mus. Crosse? copied.)

CLAUSILIA SANDBERGERI. *Cla. testâ rimatâ, solidâ, fusiformi, ventricosâ, regulariter tenuissimè liratâ,*

griseo-corneâ, albo strigatâ; anfractibus 12, *apicalibus angustis, brevibus, alteris tumidis usque ad ultimum gradatim crescentibus; aperturâ ovatâ, margine tenui, albo, labio interno triplicato, plicâ superiori validâ, plicâ columellari superiori latâ, inferiori parvâ.*

SANBERGER'S CLAUSILIA. Shell notched, solid, greyish-horn, striped with white, whorls 12, the apical ones narrow, short, the others tumid, gradually increasing to the last; aperture ovate, margin thin, white, inner lip with three plaits; upper plait strong, upper columellar plait broad, lower small.

MOUSSON. Crosse, Journal de Conchyliologie, 1873.

Hab. Borschom, Russia.

Species 71. (Mus. Crosse? copied.)

CLAUSILIA FUNICULUM. *Cla. testâ subcylindricâ, pallidissimè cornea, tenuiter lirata; anfractibus* 8-9, *altis, paulò convexis, gradatim crescentibus, ultimo obliquè descendenti; aperturâ pyriformi, labio externo tenui, labio interno super anfractuum ultimum paralleliter quadriplicato.*

THE LITTLE-CHIMNEY CLAUSILIA. Shell subcylindrical, very pale horn, finely lirated; whorls eight to nine, high, a little convex, gradually increasing; last obliquely descending; aperture pyriform, outer lip thin; inner lip with four parallel plaits upon the body whorl.

MOUSSON. Crosse, Journ. de Conchyliologie, 1873.

Hab. ——?

The four parallel plaits on the part of the inner lip where it laps over the body whorl is a peculiar characteristic of this species.

Species 72. (Mus. Hanley.)

CLAUSILIA TUBA. *Cla. testâ elongatâ, eleganter fusiformi, tenuiter liratâ; anfractibus* 12, *obliquis, versùs apicem sensim attenuatis, brevibus, medianis altis, ultimo elongato, suprà aperturam obliquè rimato; aperturâ maximâ, auriformi, margine albo, effuso, expanso, labio interno medio biplicato, plicis validis, approximatis.*

THE TUBE CLAUSILIA. Shell elongated, elegantly fusiform, finely ridged; whorls twelve, oblique, sensibly attenuated towards the apex, middle high, last elongated, obliquely notched above the aperture; aperture very large, auriform, margin white, effuse, expanded, inner lip with two plaits in the middle, plaits strong, approximate.

HANLEY. Proc. Zool. Soc., 1868.

Hab. Shan States.

Species 73. (Mus. Brit.)

CLAUSILIA GRACILICOSTA. *Cla. testâ gracilè, fusiformi, tenuiter regulariter liris laminiformibus sculptâ, anfractibus* 12, *gradatim in medio inflatis, ad laterâ rectiùsculis, ultimo profundè rimato, antè rimam obliquè carinato, propè aperturam soluto; aperturâ ovatâ, rectâ, infrà subacuminatâ, intùs rimatâ, labio externo suprà medium sinuatim tumido, labio interno angusto, plicâ superiori brevi, plicâ columellari altâ.*

THE THIN-RIBBED CLAUSILIA. Shell slender, fusiform, regularly sculptured with thin laminated ridges; whorls twelve, gradually inflated in the middle, rather straight at the sides, the last deeply notched, obliquely keeled in front of the notch, uncoiled near the mouth; aperture oval, straight, rather acuminated below, notched within; outer lip sinuously tumid above the middle; inner lip narrow, upper plait short, columella plait high.

ZEIGLER. Pfeiffer, Monograph. II. 414.

Clausilia ravida and *Clausilia porcata*, Zeigler.

Hab. Russian Mountains.

Species 74. (Mus. Brit.)

CLAUSILIA CRASSICOSTATA. *Cla. testâ pallidè fulvâ, brevi, fusiformi, costis solidis subdistantibus, rectiùsculis, liratâ, medio ventricosâ; anfractibus paucis, apicalibus sensim contractis, medianis altis, ad laterâ rectiùsculis, ultimo altissimo, infrà attenuato, profundè rimato, costis ad dorsum infrà undatis; aperturâ obliquâ, margine effusâ, reflexâ, albâ, labio externo crasso, labio interno angusto, plicis columellari et superiori validis, approximatis.*

THE THICK-RIBBED CLAUSILIA. Shell pale fulvous, short, fusiform, ridged with solid, rather distant, rather straight ribs, ventricose in the middle; whorls few, apical ones notably contracted, middle

high, rather straight at the sides, last very high, attenuated below, deeply notched, ribs waved at the lower part of the back; aperture oblique, margin effuse, reflected white, outer lip thick, inner lip narrow; columella and upper plaits strong, approximate.

BENOIL. Pfeiffer, Monograph. IV. p. 733.

Hab. Sicily.

Species 75. (Mus. Benson, Hanley.)

CLAUSILIA Jos. *Cla. testâ brevi, fusiformi, corneâ, liratâ, medio inflatâ; anfractibus medianis altis, ultimo altissimo rimato, aperturâ subtrigonâ, margine albo, tenuiùsculo, labio externo propè suturam sinuato suprà medium tumido; labio interno biplicato; plicâ superiori distanti, brevi, plicâ columellari obliquâ, validâ.*

THE Jos CLAUSILIA. Shell short, fusiform, horny, ridged, middle inflated; middle whorls high, the last very high, notched, aperture nearly trigonal, margin white, rather thin, outer lip sinuous near the suture, tumid above the middle; inner lip with two folds; upper fold distant, short; columellar fold oblique, strong.

BENSON. Pfeiffer, Monograph. IV. p. 761.

Hab. Darjiling, Himalayas.

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W.G. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp.

CLAUSILIA.

PLATE IX.

Species 76. (Mus. Brit.)

CLAUSILIA BIDENS. *Cla. testâ parvâ, ventricosâ, ferè albâ, brevi, lævigatâ; anfractibus* 8, *medianis ventricosis, ad suturam minutè distanter plicatis, ultimo infrà subcontracto, aperturâ latè ovatâ intùs propè marginem externum incrassato, labio interno tenui, plicâ superiori minutâ, plicâ columellari magnâ.*

THE TWO-TOOTHED CLAUSILIA. Shell small, ventricose, nearly white, smooth; whorls eight, middle ones ventricose, minutely distantly plaited at the suture, last a little contracted below; aperture broadly ovate, thickened within near the outer margin, inner lip thin, upper plait minute; columellar plait large.

LINNÆUS. Syst. Nat. Pfeiffer Monog. VI. 454.

Helix papillaris, Bruguière, &c.

Clausilia Mediterranea, Gray.

Clausilia vitræa, Steutz.

Clausilia virgata, Jan.

Clausilia sulcitana, Gené.

Hab. Countries of the Mediterranean.

Species 77. (Mus. Brit.)

CLAUSILIA DUBIA. *Cla. testâ plumbeâ, parvâ, subfusiformi, regulariter liratâ; anfractibus* 10, *ultimo paulò contracto, aperturâ majusculâ, obliquâ, plicis palatalibus prominentibus, plicâ superiori labii interni acutâ, plicâ columellari duplicatâ.*

THE DOUBTFUL CLAUSILIA. Shell plum-coloured, small, rather fusiform, regularly ridged; whorls ten, last a little contracted; aperture rather large, oblique, palate plaits prominent, upper plait of the inner lip sharp, columellar plait duplicate.

DRAPANAUD. Moll. fluvs. et ters.

Clausilia speciosa, Hindoboxensi, Transylvanica, Tettelbachianæ et *gracile*, Pfeiffer.

Clausilia Schelectii, Zeleb.

Clausilia abietana, Dupuy.

Hab. Central Europe.

Species 78. (Mus. Hanley.)

CLAUSILIA ARAKANA. *Cla. testâ fusiformi-pyramidatâ, flavidâ, lævigatâ; anfractibus* 12, *suprà medium sensim contractis, brevissimis, infrà medium convexis, ventricosis; aperturâ albâ, margine externo suprà medium tumido, labio interno biplicato, plicâ columellari elevatâ.*

THE ARAKAN CLAUSILIA. Shell fusiform, pyramidal, yellow, smooth; whorls twelve, those above the middle notably contracted; very short below the middle convex, ventricose; aperture white, outer margin tumid above the middle; inner lip with two plaits, columellar plait elevated.

THEOBALD. Journ. Asiat. Soc. Bengal, 1872.

Hab. Moulmein, Birmah.

Species 79. (Mus. —— ? Copied.)

CLAUSILIA INDEX. *Cla. testâ pupæformi, tenuiter striatâ, ventricosâ, fuscâ, castaneo strigatâ, anfractibus* 10, *apicalibus* 5, *lævibus, alteris convexis, altiùsculis; aperturâ ovatâ, margine fulvo, labio interno triplicato, plicis æquidistantibus, brevibus.*

THE INDEX CLAUSILIA. Shell pupa-shaped, finely striated, ventricose, brown, striped with chestnut, whorls ten, five apical smooth, the others convex, rather higher; aperture ovate, margin fulvous, inner lip with three equidistant short plaits.

MOUSSON. Crosse, Journ. de Conch., 1873, p. 215.

Hab. Borschom, in Russia.

Species 80. (Mus. Brit.)

CLAUSILIA CECILLEI. *Cla. testâ fusiformi-pyramidatâ, solidâ, leviter striatâ; corneo-plumbeâ, medio et infrà ventricosâ, anfractibus* 12, *apicalibus* 7 *contractis, brevibus, alteris gradatim latioribus, altis; aperturâ oblongâ, margine albo, crasso; propè suturam sinuato, attenuato, labio interno biplicato.*

CECILLE'S CLAUSILIA. Shell fusiform, pyramidal, solid, lightly striated, horny-plum-coloured; ventricose in the middle and under; whorls twelve, apical ones seven, contracted, short, the rest gradually broader, elevated; aperture oblong, margin white, thick, sinuous near the suture, attenuated, inner lip biplicate.

PHILIPPI. Pfeiffer, Novit. Conch., p. 122.

Hab. China.

Species 81. (Mus. Brit.)

CLAUSILIA DORHNII. *Cla. testâ elongatâ, subfusiformi, corneo-rubescenti, infrà castaneâ, lævigatâ; anfractibus circa* 10, *apicalibus* 4 *contractis, brevibus, alteris altissimis, moderatè ventricosis; ultimo elongato, attenuato, suprà aperturam rimato; aperturâ obliquâ, anticè productâ, margine crasso, albo, rotundo, labio interno biplicato, plicis elongatis; plicâ internâ unâ obliquâ conspicuâ.*

DORHN'S CLAUSILIA. Shell elongated, rather fusiform, reddish horn, chestnut below, smooth; whorls about ten, the four apical ones contracted, short, the others very high, moderately ventricose; last elongated, attenuated, notched above the aperture; aperture oblique, produced anteriorly; margin thick, white, rounded, inner lip with two plaits, plaits elongated; an inner plait oblique, conspicuous.

PFEIFFER. Malak. Bl., 1860, p. 213.

Hab. Venezuela.

Species 82. (Mus. Crosse.)

CLAUSILIA YOKOHAMENSIS. *Cla. testâ ventricosâ, fusiformi, crassiùsculâ, fusco-corneâ, leviter et irregulariter striatâ; anfractibus* 9–10, *altis, moderatè convexis, apicali obtusissimo, penultimo latissimo, ultimo elongato, non rimato; aperturâ violaceâ, pyriformi-ovatâ, prorsum productâ; margine latè reflexo, plicâ superiori labii internè validâ, compressâ, plicâ superiori columellari oblique, inferiori parvâ.*

THE YOKOHAMA CLAUSILIA. Shell ventricose, fusiform, rather thick, horny-brown, slightly and irregularly striated; whorls nine to ten, high, moderately convex, apical one very obtuse, penultimate very broad, last elongated, not notched; aperture violet, pyriform-ovate, produced forwards; margin broadly reflected; upper plait of the inner lip strong, compressed; upper columellar plait oblique, lower small.

CROSSE. Journal de Conchyliologie, 1873, p. 133.

Hab. Yokohama, Japan.

Species 83. (Mus. ——? Copied.)

CLAUSILIA SEMILAMELLATA. *Cla. testâ tenui, parvâ, albâ, lævigatâ, fusiformi, medio subventricosâ; anfractibus* 8-9, *inferioribus altis, moderatè convexis, ultimo elongato, attenuato, dorso propè aperturam lirato, suprà aperturam rimato; aperturâ obliquè productâ, ovatâ, subsolutâ, margine tenui, angustè reflexo, plicâ superiori, labii interni elongatâ, columellâ, arcuatâ, angustâ, plicis* 5 *parvis, parallelibus æqualibus instructâ.*

THE HALF-LAMINATED CLAUSILIA. Shell thin, small, white, smooth, fusiform, rather ventricose in the middle; whorls eight or nine, lower ones high, moderately convex, last elongated, attenuated, ridged near the aperture on the back, notched above the aperture; aperture obliquely produced, ovate, rather solid, margin thin, narrowly reflected, upper plait of the inner lip elongated, columella arched, narrow, set with five small, parallel equal plaits.

MOUSSEN —— ? Crosse Journ. Conch.

Hab. —— ?

Species 84. (Mus. ——? Copied.)

CLAUSILIA SIEVERSI. *Cla. testâ albidâ, parvâ, subcylindraceâ, attenuatâ lævigatâ, anfractibus* 9-10, *vix convexis, ultimo obliquè elongato, suprà aperturam rimato; aperturâ pyriformi, plicâ superiori labii interni prominenti, columellâ angustâ, arcuatâ, creberrimè transversè plicatâ.*

CLAUSILIA SIEVERSI. Shell whitish, small, rather cylindrical, attenuated, smooth, whorls nine or ten, very little convex, the last obliquely elongated, notched above the aperture; aperture pyriform, upper plait of the inner lip prominent, columella narrow, arched, very closely transversely plaited.

PFEIFFER —— ? Crosse Journ. Conch., 1873, p. 214.

Hab. Lenkoram, Russia.

The granulations, or plaits on the arched columella, are much more numerous in this than in the preceding species, and the last whorl has no ridges on the back.

Species 85. (Mus. Brit.)

CLAUSILIA COMMUTATA. *Cla. testâ parvâ, pallidè corneâ, lævigatâ, fusiformi, anfractibus brevibus, versùs apicem gradatim contractis, medio moderatè inflatis; aperturâ ovatâ, biplicatâ.*

THE COMMUTED CLAUSILIA. Shell small, pale horny, smooth, fusiform, whorls short, gradually contracted towards the apex, moderately inflated in the middle, aperture ovate, biplicate.

ROSSMASLER. Pfeiffer, Monog. Hel. II. p. 401.

Hab. Spain, Sicily, &c.

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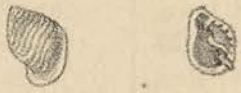

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G B Sowerby, del et lith.

Vincent Brooks, Day & Son, imp.

CLAUSILIA.

PLATE X.

Species 86. (Mus. Brit.)

CLAUSILIA PLICATULA. *Cla. testâ fusiformi, rufo-fulvâ, tenuissimè striatâ, versus apicem attenuatâ, medio ventricosâ; anfractibus duodecenis, ultimo subcontracto; aperturâ subquadratâ, supernè ad suturam subacuminatâ, columellâ inter laminas dentato-plicatâ.*

THE PLAITED CLAUSILIA. Shell fusiform, reddish-fawn, very finely striated, attenuated towards the apex, ventricose in the middle; whorls twelve, the last contracted; aperture rather square, acuminated above at the suture, columella tooth-plaited between the folds.

MONTAGU. Pfeiffer, Mon. Hel. VI. p. 498.

Hab. Pyrmont.

Species 87. (Mus. Brit.)

CLAUSILIA MEISNERIANA. *Cla. testâ oblongo-fusiformi, pallidè fulvâ, tenuiter liratâ, supernè attenuatâ, medio inflatâ, apice rotundo; anfractibus tridecenis, moderatè convexis; aperturâ mediocri, laminâ columellari prominenti, labio externo supernè flexuoso, prope suturam incrassato.*

MEISNER'S CLAUSILIA. Shell oblong-fusiform, pale fulvous, finely ridged, attenuated above, inflated in the middle, apex rounded; whorls thirteen, moderately convex; aperture middle-sized, columellar lamina prominent, outer lip flexuous above, thickened near the suture.

SHUTTLEWORTH. Pfeiffer, Mon. Helic. VI. p. 405.

Hab. Gorsica, Sardinia, &c.

Species 88. (Mus. Brit.)

CLAUSILIA CUMINGIANA. *Cla. testâ lævigatâ, fusco-purpureâ, elongatâ, subpyramidatâ, versus apicem gradatim attenuatâ; anfractibus decenis, albis, perobliquis, ad latera rectiùsculis; aperturâ magnâ, auriformi, laminis columellaribus duabus, approximatis, margine albo, crasso.*

CUMING'S CLAUSILIA. Shell smooth, brown-purple, elongated, subpyramidal, gradually attenuated towards the apex; whorls ten, white, very oblique, rather straight at the sides; aperture large, ear-shaped, columellar laminæ two, approximate, margin white, thick.

PFEIFFER, Mon. Helic. VI. p. 406.

Hab. Philippines.

Species 89. (Mus. Brit.)

CLAUSILIA EXCELLENS. *Cla. testâ pallidè corneâ, solidâ, tenuiter sulcatâ, magnâ, ventricosâ, subfusiformi; anfractibus undecenis, perobliquis; aperturâ magnâ, auriformi, laminâ parietali prominenti, columellari elevatâ, plicâ tuberculiformi trans labrum infrà trajectâ; labio externo supra medium incrassato.*

THE EXCELLING CLAUSILIA. Shell pale horn, solid, finely sulcated, large, ventricose, rather fusiform; whorls eleven, very oblique; aperture large, auriform, parietal lamina prominent, columellar raised, tuberculiform plate below crossing the inner lip, outer lip thickened above the middle.

PFEIFFER. Mon. Helic. VI. p. 427.

Hab. Loo Choo.

A fine species, nearly white, with the last whorl more strongly wrinkled than the others.

Species 90. (Mus. Brit.)

CLAUSILIA PLATYDERA. *Cla. testâ solidâ, subventricosâ, solidiùsculâ, pallidè corneâ, pyramidatâ, tenuissimè striatâ; anfractibus undecenis, gradatim attenuatis; aperturâ subauriformi, laminâ columellari angustâ, subverticali, margine albo, incrassato, supra medium labii externi tumido.*

THE FLAT-SCRAPED CLAUSILIA. Shell solid, rather ventricose, pale horny, pyramidal, very finely striated; whorls eleven, gradually attenuated; aperture rather auriform, columellar lamina narrow, nearly vertical, margin white, thick, swelled above the middle of the outer lip.

MARTENS. —— ?

Hab. Japan.

Species 91. (Mus. Brit.)

CLAUSILIA FLUVIATILIS. *Cla. testâ ventricosâ, solidâ, pyramidatâ, medio et infrà inflatâ; pallidè fuscâ,*

tenuissimè striatâ, versus apicem attenuatâ; anfractibus undecenis, obliquis, convexis, ultimo infrà carinato; aperturâ magnâ; labio interno crenulato, laminâ columellari angustâ, elevatâ, ferè perpendiculari; labio interno in tuberculum dentiformem desinenti.

THE FLUVIATILE CLAUSILIA. Shell ventricose, solid, pyramidal, inflated in the middle and below; pale brown, very finely striated, attenuated towards the apex; whorls eleven, oblique, convex; last keeled below; aperture large, inner lip crenulated, columellar lamina narrow, raised, almost perpendicular; inner lip ending in a tooth-shaped tubercle.

BENSON. —— ?

Hab. Chusan.

The last whorl is keeled at the bottom. In this and the preceding species the columellar lamina is closely pressed against the edge, and is almost perpendicular.

Species 92. (Mus. Brit.)

CLAUSILIA KOBENSIS. *Cla. testâ solidâ, ventricosâ, pyramidatâ, rubro-fuscâ, tenuissimè liratâ; anfractibus duodecenis, obliquis, versus apicem attenuatis, infra medium convexis, ultimo ad terminum rotundo; aperturâ magnâ, margine albo, crasso, supra medium labii externi tumido; laminâ columellari elongatâ, peculiariter arcuatâ, plicâ minori infrà instructâ.*

THE KOBE CLAUSILIA. Shell solid, ventricose, pyramidal, red-brown, finely ridged; whorls twelve, oblique, attenuated towards the apex, convex below the middle, last rounded at the end; aperture large, margin white, thick, swelled above the middle of the outer lip; columellar lamina elongated, peculiarly arched, with a smaller inserted below.

SMITH. Quarterly Journal of Conchology.

Hab. Kobe, Japan.

Species 93. (Mus. Brit.)

CLAUSILIA VETUSTA. *Cla. testâ brevi, subventricosâ, fuscâ vel albâ, tenuissimè liratâ; anfractibus undecenis, tribus inferioribus valdè inflatis; aperturâ parvâ, auriformi; laminâ columellari prominenti, elevatâ, semiinternâ.*

THE ANTIQUATED CLAUSILIA. Shell short, subventricose, brown or white, very finely ridged; whorls eleven, three lower much inflated; aperture small, auriform, columellar lamina prominent, raised, half internal.

ZEIGLER. Pfeiffer. Mon. Helic. VI. 499.

Hab. Illyria.

Species 94. (Mus. Brit.)

CLAUSILIA ACULUS. *Cla. testâ subfusiformi, corneâ, tenuissimè striatâ; anfractibus decenis, superioribus attenuatis, rectiusculis, inferioribus inflatis; aperturâ simplici, margine angustè incrassato, laminâ columellari perelevatâ, parvâ.*

THE NEEDLE CLAUSILIA. Shell subfusiform, horny, very finely striated; whorls ten, upper attenuated, rather straight, lower inflated; aperture simple, margin narrowly thickened, columellar lamina much raised, small.

BENSON. Pfeiffer. Mon. Helic. VI. p. 482.

Hab. China.

Species 95. (Mus. Brit.)

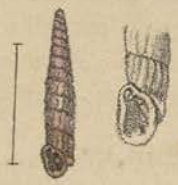
CLAUSILIA OLYMPICA. *Cla. testâ parvâ, fusiformi, fulvâ, tenuissimè striatâ; anfractibus duodecenis, superioribus attenuatis, medianis inflatis, ultimo elongato, soluto, tortuo, profundè rimato; aperturâ auriformi, subquadrato, margine incrassato, laminâ columellari nullo.*

THE OLYMPIC CLAUSILIA. Shell small, fusiform, fulvous, very finely striated; whorls twelve, upper attenuated, middle inflated, last lengthened, unwound, twisted, deeply notched; aperture ear-shaped, rather square, margin thickened, columellar lamina none.

FRIVOLDT. Pfeiffer. Mon. Hel. VI. p. 514.

Hab. The Olympic Mountain.

A tortuous swelling of the part above the mouth is remarkable in this species.



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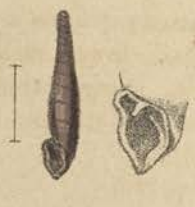

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son Imp.

CLAUSILIA.

PLATE XI.

Species 96. (Mus. Brit.)

CLAUSILIA DAICICA. *Cla. testâ ventricosâ, succineâ et plumbeâ, lævigatâ; anfractibus undecenis, ultimo angustato, dorso rugato; aperturâ oblongâ, posticè angustatâ; labio externo supernè sinuato, margine supra medium tumido, laminâ columellari, magno, laminis internis inconspicuis.*

THE DACIAN CLAUSILIA. Shell ventricose, amber and plum, smooth; whorls eleven, last narrow, wrinkled at the back; aperture oblong, posteriorly narrowed; outer lip sinuous above, margin tumid above the middle, columellar lamina large, inner laminæ inconspicuous.

FRIVALDSKY. Pfeiffer. Mon. Hel. VI. p.

Hab. Serbia.

Species 97. (Mus. Brit.)

CLAUSILIA SULCOSA. *Cla. testâ angustatâ, subpyramidatâ; anfractibus undecenis, obsoletè costellis rectiùsculis liratis; ultimo elongato, dorso infrà sulcato, carinato; aperturâ magnâ, laminis columellaribus duabus, superiori obliquâ, inferiori brevi, prominenti.*

THE GROOVED CLAUSILIA. Shell narrow, rather pyramidal; whorls eleven, obsoletely ridged with small rather straight ribs, last elongated, back grooved and keeled below; aperture large, columellar laminæ two, upper oblique, lower short, prominent.

WAGNER. Pfeiffer. Mon. Helic. VI. p. 499.

Clausilia irregularis. Zeigler.

Hab. Dalmatia.

Species 98. (Mus. Brit.)

CLAUSILIA SOMCHETICA. *Cla. testâ brevi, ventricosâ, ferè lævigatâ; pallidè corneâ; anfractibus undecenis, medianis latis; aperturâ subquadratâ, laminâ columellari nullâ, laminâ parietali brevi; labio externo sinuoso.*

THE SOMCHETICA CLAUSILIA. Shell short, ventricose, almost smooth, pale horn; whorls eleven, middle white; aperture subquadrate, columellar lamina none, parietal lamina short, outer lip sinuous above.

PFEIFFER. Mon. Helic. VI. p. 446.

Hab. ——?

Species 99. (Mus. Brit.)

CLAUSILIA FRAUENFELDTI. *Cla. testâ elongato-fusiformi, fuscâ, lævigatâ; anfractibus decenis, medianis et inferioribus inflatis, ad suturam albo angustè fasciatis; ultimo elongato, angustato; aperturâ pyriformi, expansâ, castaneâ; labio externo supra medium tumido, laminâ columellari lato.*

FRAUENFELDT'S CLAUSILIA. Shell elongate-fusiform, brown, smooth; whorls ten, middle and lower inflated, narrowly banded with white at the suture, last elongated, narrow; aperture pyriform, expanded, chestnut; outer lip tumid above the middle, columellar lamina broad.

ZELEBOR. Pfeiffer. Mon. Helic VI. p. 440.

Hab. Serbia.

Species 100. (Mus. Brit.)

CLAUSILIA PAGANA. *Cla. testâ parvâ, brevi, fusiformi, obscurè fuscâ, tenuissimè striatâ; anfractibus decenis, apicali rotundo, superioribus attenuatis, inferioribus subventricosis; aperturâ auriformi, margine crasso, labio externo supra medium sinuoso, tumido, laminâ columellari internè extenso.*

THE PAGAN CLAUSILIA. Shell small, short, fusiform, dull brown, very finely striated; whorls ten, apical round, upper attenuated, lower rather ventricose; aperture auriform, margin thick, outer lip sinuous above the middle, tumid, columellar lamina extended within.

ZEIGLER. Pfeiffer. Mon. Helic. VI. p. 505.

Hab. Serbia.

Species 101. (Mus. Brit.)

CLAUSILIA SEMIDENTICULATA. *Cla. testâ breviùsculâ, fusiformi, plumbeâ, lævigatâ, apice succineâ; anfractibus undecenis, medianis ventricosis, ultimo ad dorsum elongato, soluto, tortuo, medio sulcato;*

aperturâ succineâ, labio externo, supernè emarginato, supra medium sinuatim tumido, margine crenulato; columellâ infra laminam triplicato.

The half-denticulated Clausilia. Shell rather short, fusiform, plum, smooth, apex amber; whorls eleven, middle ventricose, last elongated at the back, unwound, tortuous, with a groove in the middle; aperture amber, outer lip emarginated, sinuously tumid above the middle, margin crenulated; columella triplicate below the lamina.

Pfeiffer. Mon. Helic. VI. p. 509.

Hab. Turkey; on the banks of the Bosphorus.

Species 102. (Mus. Brit.)

Clausilia Fortunei. *Cla. testâ elongato-fusiformi, solidâ, obscurè plumbeâ, tenuissimè striatâ; anfractibus quaterdecenis, superioribus attenuatis, medianis et inferioribus ventricosis; ultimo elongato, medio compresso; aperturâ magnâ, auriformi, succineâ, margine albo, crasso, laminâ columellari magnâ, crassâ, margine columellari medio sinuato.*

Fortun's Clausilia. Shell elongated-fusiform, solid, dull plum, very finely striated; whorls fourteen, upper attenuated, middle and lower ventricose; last elongated, middle compressed; aperture large, ear-shaped, amber, margin white, thick; columellar lamina large, thick, columellar margin sinuous in the middle.

Pfeiffer. Mon. Helic. VI. p. 494.

Hab. Shanghai.

Species 103. (Mus. Brit.)

Clausilia Bergeri. *Cla. testâ subfusiformi, fusco-plumbeâ, lævi; anfractibus undecenis, medianis ventricosis, ultimo elongato, birugato; aperturâ subtrigonâ, labio externo suprà infràque acuminato.*

Berger's Clausilia. Shell subfusiform, brown-plum, smooth, whorls eleven, middle ventricose, last elongated, with two wrinkles; aperture rather trigonal, outer lip acuminated above and below.

Mayer. Pfeiffer. Mon. Helic. VI. p. 422.

Hab. Bavaria.

Remarkable for the peculiar triangular form of the mouth.

Species 104. (Mus. Brit.)

Clausilia sericata. *Cla. testâ brevi, fusiformi, ventricosâ, lævi, fusco-plumbeâ; apice et aperturâ succineis; aperturâ magnâ, margine expanso; laminâ columellari lato, elevato, laminis internis quaternis.*

The silken Clausilia. Shell short, fusiform, ventricose, smooth, brown-plum, apex and aperture amber; aperture large, margin expanded; columellar lamina broad, raised, four internal laminæ.

Pfeiffer. Mon. Helic. VI. p. 492.

Hab. Eubœa.

Species 105. (Mus. Brit.)

Clausilia Lerosiensis. *Cla. testâ obscurè plumbeâ, acutè et crebrè laminatâ, subfusiformi, anfractibus undecenis, apicalibus lævigatis, medianis ventricosis, ultimo elongato, ad dorsum costis distantibus lirato; aperturâ triplicatâ, auriformi.*

The Leros Clausilia. Shell dull plum, sharply and closely laminated, rather fusiform; whorls eleven, apical smooth, middle ventricose, last elongated, ridged on the back with distant ribs; aperture with three plaits, auriform.

Ferussac. —— ?

Hab. Island Leros.

106.

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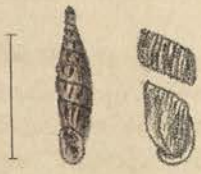
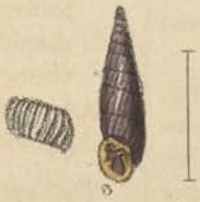


113.

114.



115.

G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

CLAUSILIA.

PLATE XII.

Species 106. (Mus. Brit.)

CLAUSILIA EXILIS. *Cla. testâ pupæformi, fuscâ, tenuissimè liratâ; anfractibus novenis, medianis subæqualibus, ultimo contracto; aperturâ parvâ, margine externo supernè flexuosim tumido, margine interno prope suturam biplicato, plicâ columellari nullâ, laminis semiinternis intus productis.*

THE NARROW CLAUSILIA. Shell pupa-shaped, brown, very finely ridged; whorls nine, middle nearly equal, last contracted, aperture small, outer margin with a tumid band above, inner margin with two plaits near the suture, no columellar plait, internal plaits extended within.

LOWE. Proc. Zool. Soc. 1866, p. 307.

Hab. Madeira.

Species 107. (Mus. Brit.)

CLAUSILIA BELCHERI. *Cla. testâ fusiformi, lævigatâ, altâ, fusco-stramineâ; anfractibus decenis, convexis, supra medium attenuatis, medio inflatis, ultimo supra aperturam elongato; aperturâ subauriformi, supernè sinuatâ, plicâ columellari magnâ, elevatâ.*

BELCHER'S CLAUSILIA. Shell fusiform, smooth, raised, brown-straw; whorls ten, convex, attenuated above the middle, inflated at the middle, last lengthened above the aperture; aperture rather ear-shaped, sinuated above, columellar fold large, elevated.

PFEIFFER. Mon. Hel. Vol. VI. p. 412.

Hab. Corean Archipelago.

Species 108. (Mus. Brit.)

CLAUSILIA CLAVIFORMIS. *Cla. testâ breviter fusiformi, lævissimâ, fusco-stramineâ; anfractibus octonis, convexis, infrà medium inflatis, ultimo subtortuoso; aperturâ perpendiculariter oblongâ; labio interno biplicato, plicis parvis.*

THE KEY-SHAPED CLAUSILIA. Shell shortly fusiform, very smooth, brown-straw; whorls eight, convex, inflated below the middle, last rather tortuous; aperture perpendicularly oblong, inner lip with two folds, folds small.

PFEIFFER. Mon. Hel. Vol. VI., p. 412.

Hab. Corean Archipelago.

Much resembling *Clausilia Belcheri*, but shorter and more ventricose.

Species 109. (Mus. Brit.)

CLAUSILIA RUDIS. *Cla. testâ pallidè fulvâ, fusiformi, laminatim liratâ, liris crassis, subdistantibus; anfractibus undecenis, supra medium longè attenuatis, medio et infrà valdè inflatis, ultimo infrà subcontracto; aperturâ oblongâ, subquadratâ, plicis labii internis parvis.*

THE ROUGH CLAUSILIA. Shell pale fulvous, fusiform, laminately ridged, ridges thick, rather distant; whorls eleven, attenuated some length above the middle, much inflated at the middle and under, last somewhat contracted below; aperture oblong, rather square, folds of the inner lip small.

PFEIFFER. Proc. Zool. Soc. Lond. 1864.

Hab. Island of Crete.

Species 110. (Mus. Brit.)

CLAUSILIA PETROSA. *Cla. testâ altâ, leviter liratâ, subfusiformi, corneâ; anfractibus duodecenis, superioribus brevibus, attenuatis, inferioribus tribus altis, ultimo elongato, tortuo, obliquè producto; aperturâ auriformi, margine albo, crasso, labio interno validè biplicato, labio externo supra medium tumido.*

THE STONY CLAUSILIA. Shell high, slightly ridged, subfusiform, horny; whorls twelve, upper short, attenuated, lower three high, last elongated, tortuous, obliquely produced; aperture ear-shaped, margin white, thick, inner lip with two strong folds, outer lip swelled above the middle.

PARREYS. Küster, p. 226.

Hab. Greece.

The aperture is curiously twisted and brought round, so as to project on the right side.

Species 111. (Mus. Brit.)

CLAUSILIA IDÆ. *Cla. testâ subfusiformi, solidâ, latâ, pruinosâ, laminis fulvis numerosis, rectiùsculis, tenuibus liratâ; aperturâ magnâ, subquadratâ, prope suturam sinuatâ, tumidâ, plicâ parietali parvâ, laminâ columellari mediocri.*

THE MOUNT IDA CLAUSILIA. Shell subfusiform, solid, broad, plum-colour, ridged with fulvous, numerous, rather straight, thin laminæ; aperture large, rather square, sinuated and tumid near the suture; parietal plait small, columellar laminæ middle-sized.

PFEIFFER. Mon. Vol. VI. p. 498.

Hab. Mount Ida.

Species 112. (Mus. Brit.)

CLAUSILIA DISTANS. *Cla. testâ fusiformi, elongatâ, lacteâ, angustâ, distanter liratâ; anfractibus quaterdecenis, superioribus attenuatis, medianis et inferioribus latiùsculis, ultimo breviter rimato, declivi, aperturâ perpendiculariter oblongâ, supernè attenuatâ, margine albo, columellâ rectiùsculâ, laminâ columellari obliquè dentiformi.*

THE DISTANT CLAUSILIA. Shell fusiform, elongated, cream-coloured, narrow, distantly ridged; whorls fourteen, upper attenuated, middle and lower rather wide, last shortly notched, sloped down; aperture perpendicularly oblong, attenuated above, margin white, columella rather straight, columellar laminæ obliquely tooth-shaped.

PFEIFFER. Proc. Zool. Soc. 1864, p. 605.

Hab. Sudsuro, Crete.

Species 113. (Mus. Brit.)

CLAUSILIA COMPRESSA. *Cla. testâ regulariter fusiformi, lilaceâ, strigis brevibus, fuscis variegatâ, tenuiter laminatim liratâ; anfractibus decenis, superioribus parvis, ultimo elongato; aperturâ perpendiculariter oblongâ, labio externo prope medium sinuatim tumido, plicâ parietali parvâ, plicâ columellari prominenti.*

THE COMPRESSED CLAUSILIA. Shell regularly fusiform, lilac, variegated with short brown stripes, ridged with fine laminæ; whorls ten, upper small, last elongated; aperture perpendicularly oblong, outer lip sinuously tumid near the middle, parietal fold small, columellar fold prominent.

PFEIFFER. Mon. Hel. Vol. VI. p. 428.

Hab. Island of Cerigo.

Species 114. (Mus. Brit.)

CLAUSILIA SCALARIS. *Cla. testâ, brevi, latâ, fulvâ, tenuiter laminatim liratâ; anfractibus senis, prope suturam latioribus angulatis, ultimo altâ, infrà contracto; aperturâ auriformi, columellâ infrà retrorsim expansâ, labio externo supra medium sinuatim tumido, plicâ parietali parvâ, plica columellari mediocri, obliquâ.*

THE LADDER-LIKE CLAUSILIA. Shell short, broad, fulvous, with fine laminar ridges; whorls six, broader and angular near the suture, last high, contracted below; aperture auriform, columella expanded backwards below, outer lip sinuously tumid above the middle, parietal fold small; columella fold middling, oblique.

PFEIFFER. Mon. Hel. Vol. VI. p. 439.

Hab. Malta.

The whorls are angularly shouldered, so as to give the appearance of steps.

Species 115. (Mus. Brit.)

CLAUSILIA HAUERI. *Cla. testâ breviùsculâ, pyramidato-subfusiformi, latâ, distanter tenuiter liratâ, inter liras pruinosâ; anfractibus decenis, inferioribus magnis; aperturâ auriformi, margine crasso, albo, labio externo supra medium tumido, plicâ parietali minutâ, plicâ columellari altissimâ, ferè perpendiculari.*

HAUER'S CLAUSILIA. Shell rather short, pyramidally subfusiform, broad, distantly finely ridged, plum-coloured between the ridges; whorls ten, lower large; aperture auriform, margin thick, white, outer lip tumid above the middle, parietal fold minute, columellar fold very high, almost perpendicular.

BIELZ. Pfeiffer, in Novit. Conch. Fasc. XXII. p. 264.

Hab. Transylvania.

116.

117.

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125.

G.B. Sowerby, del et lith.

Vincent Brooks. Day & Son, Imp.

CLAUSILIA.

PLATE XIII.

Species 116. (Mus. Brit.)

CLAUSILIA LIVEUS. *Cla. testâ dextrali, pruinoso-fuscâ, breviùsculâ, fusiformi; anfractibus octonis, altis, inferioribus subinflatis, ultimo contracto, obliquo; aperturâ auriformi, infrà obliquè productâ, margine crasso, albo, plicâ columellari magnâ, plicâ parietali parvâ, labio externo ad medium latè tumido.*

THE LIVID CLAUSILIA. Shell dextral, plum-brown, rather short, fusiform; whorls eight, high, rather inflated, last contracted, oblique; aperture ear-shaped, obliquely produced below; margin thick, white, columellar plait large, parietal plait small, outer lip broadly tumid at the middle.

BIELZ. Pffr. Vol. IV. p. 718.

Clausilia Lischkeana. Bielz.

Hab. Transylvania.

Species 117. (Mus. Brit.)

CLAUSILIA BADIA. *Cla. testâ parvâ, breviùsculâ, subfusiformi, olivaceo-fuscâ, lævi; anfractibus octonis; aperturâ subobliquè ovatâ, plicâ columellari magnâ, elevatâ, plicâ parietali parvâ.*

THE BAY CLAUSILIA. Shell small, rather short, subfusiform, olive-brown, smooth; whorls eight; aperture rather obliquely oval, columellar plait large, raised, parietal plait small.

ZEIGLER. Pfeiffer. Vol. VI. p. 496.

Clausilia fontana. Schmidt.

Clausilia cruda. Schmidt.

Hab. ——?

Species 118. (Mus. Brit.)

CLAUSILIA SCHMIDTI. *Cla. testâ parvâ, fusiformi, politâ, pruinosâ; anfractibus duodecenis, superioribus parvis, medianis et inferioribus subinflatis, ultimo infrà subcontracto; aperturâ subaurantiâ, oblongâ, labio externo supra medium sinuatim tumido, plicâ columellari productâ, plicis parietalibus duabus.*

SCHMIDT'S CLAUSILIA. Shell small, fusiform, polished, plum-coloured; whorls twelve, upper small, middle and lower somewhat inflated, last a little contracted below; aperture rather orange, oblong, outer lip sinuously tumid, columella plait produced, parietal plaits two.

PFEIFFER. Mon. Hel. Vol. VI. p. 490.

Hab. Carinthia.

Species 119. (Mus. Brit.)

CLAUSILIA PERARATA. *Cla. testâ latâ, brevi, fumoso-fuscâ, longitudinaliter, perobliquè costatâ; anfractibus senis, ultimo et penultimo altissimis, ultimo infrà contractâ et prolongatâ; aperturâ depressâ, subrotundâ, auriformi; margine ad columellam obliquè expanso; plicâ parietali prominenti; plicâ columellari crassâ.*

THE PLOUGHED CLAUSILIA. Shell broad, short, smoky-brown, longitudinally very obliquely ribbed; whorls six, last and last but one very high, last contracted below and prolonged; aperture depressed, rather round, ear-shaped; margin obliquely expanded at the columella; parietal plait prominent; columellar plait thick.

MARTINI. ——?

Hab. New Granada.

Species 120. (Mus. Brit.)

CLAUSILIA TERES. *Cla. testâ angustâ, altissimâ, lævigatâ, lilaceâ; anfractibus septemdecenis, superioribus valdè attenuatis, inferioribus altis, subinflatis; aperturâ aurantiâ, perpendiculariter oblongâ, labio externo, supra medium tumidâ; plicâ columellari obliquâ, elevatâ, plicâ parietali parvâ, acutâ.*

THE ROLLING-PIN CLAUSILIA. Shell narrow, very high, smooth, lilac; whorls seventeen, upper very attenuated, lower high, subinflated; aperture orange, perpendicularly oblong, outer lip tumid above the middle, columellar plait oblique, raised; parietal plait small, sharp.

OLIVIER. (Bulimus.) Pffr. Mon. Hel. Vol. II. p. 414.

Hab. Crete.

Species 121. (Mus. Brit.)

CLAUSILIA SIEBOLDTI. *Cla. testâ breviùsculâ, fusiformi, supernè succineâ, infrà pruinosâ, lævigatâ; an-*

fractibus novenis, superioribus subattenuatis, medianis inflatis; aperturâ magnâ, auriformi; margine albo, crasso, labio externo suprà medium tumido, plicâ parietali brevi, acutâ, plicâ columellari prominenti.

SIEBOLDT'S CLAUSILIA. Shell rather short, fusiform, amber above, plum-coloured below, smooth; whorls nine, upper rather attenuated, middle inflated; aperture large, ear-shaped; margin white, thick, outer lip tumid above the middle, parietal plait short, sharp; columella plait prominent.

PFEIFFER. Malak. Bl. 1869.

Hab. Japan.

Species 122. (Mus. Brit.)

CLAUSILIA MARONHONENSIS. *Cla. testâ brevi, latâ, subcylindricâ, lævigatâ, albâ et pallidè fulvâ; anfractibus senis, altis, ultimo infrà subcontracto, prolongato, profundè et obliquè rimato; aperturâ rotundo-auriformi, margine albo, expanso, supernè rimato, plicâ parietali prominenti; plicâ columellari parvâ, altissimâ.*

THE MARANHON CLAUSILIA. Shell short, broad, rather cylindrical, smooth, white and pale fulvous; whorls six, high, last rather contracted below, prolonged, deeply and obliquely notched; aperture roundly-auriform; margin white, expanded, notched above; parietal plait prominent, columellar plait small, very high.

ALBERS. Pfeiffer. Mon. Hel. IV. p. 785.

Hab. River Maranhon, Columbia.

Species 123. (Mus. Brit.)

CLAUSILIA CORTICINA. *Cla. testâ altâ, subpyramidatâ, lævigatâ, pruinosâ; anfractibus novenis, inferioribus altis, ultimo prolongato; aperturâ maximâ, supernè subacuminatâ, prope suturam sinuatim emarginatâ; plicâ parietali tenui, plicâ columellari altâ, parvâ, columellâ arcuatâ.*

THE RIND CLAUSILIA. Shell high, rather pyramidal, smooth, plum-coloured; whorls nine, lower high, last prolonged; aperture very large, rather acuminated above, sinuously emarginated near the suture; parietal plait thin, columellar plait high, small, columella plait curved.

VON BUSCH. Pfr. Mon. Hel. II. p. 404.

Hab. Java.

Species 124. (Mus. Brit.)

CLAUSILIA KUTSCHIGI. *Cla. testâ brevi, ventricosissimâ, lilacinâ, lævigatâ; anfractibus octonis, tribus inferioribus altis, inflatis, ultimo subcontracto, ad dorsum plicato; aperturâ magnâ, latâ, margine crasso, plicis parietali et columellari acuminatis, prominentibus.*

KUTSCHIG'S CLAUSILIA. Shell short, very ventricose, lilac, smooth; whorls eight, three lower high, inflated, last a little contracted, plaited at the back; aperture large, broad; margin thick, parietal and columellar plaits acuminated, prominent.

KÜSTER, p. 274.

Clausilia costicolla. Parr.

Clausilia corpulenta. Kutschig.

Hab. Dalmatia.

Species 125. (Mus. Brit.)

CLAUSILIA CASTALIA. *Cla. testâ subpyramidatâ, supernè attenuatâ, medio et infrà inflatâ, fuscâ, lævi, anfractibus novenis, inflatis; aperturâ parvâ, obliquè subproductâ, supernè acuminatâ; margine crasso, plicâ columellari altâ.*

THE CASTALIA CLAUSILIA. Shell rather pyramidal, attenuated above, inflated in the middle and below; brown, smooth; whorls nine, inflated; aperture small, a little obliquely produced, acuminated above; margin thick, columellar plait high.

ROTH. Rossmässler, Icon. III. p. 54.

Hab. Mount Parnassus.

126.

127.

128.

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134.

G.B. Sowerby, del et lith.

Vincent Brooks, Day & Son, Imp.

CLAUSILIA.

PLATE XIV.

Species 126. (Mus. Brit.)

CLAUSILIA CONTAMINATA. *Cla. testâ brevissimâ, latâ, lævigatâ, lilacinâ; anfractibus senis; aperturâ latâ, subquadratâ, subaureâ, plicis nullis.*

THE CONTAMINATED CLAUSILIA. Shell very short, broad, smooth, lilac; whorls six; aperture broad, rather square, rather golden-tinted; no plaits.

ZEIGLER. Pfeiffer. Mon. Hel. II. 436.

Hab. Cephalonia.

Species 127. (Mus. Brit.)

CLAUSILIA MADENSIS. *Cla. testâ dextrali, pyramidatâ, brevi, corneâ et pruinosâ, lævi; anfractibus novenis; superioribus angustis, inferioribus ventricosis; aperturâ obliquâ, auriformi, supernè angustatâ; plicâ columellari prominenti, plicâ parietali elongatâ.*

THE MADEN CLAUSILIA. Shell dextral, pyramidal, short, horny, plum-coloured, smooth; whorls nine, upper narrow, lower ventricose; aperture oblique, ear-shaped; narrow above; columellar fold prominent, parietal fold lengthened.

FUSSENDORF. —— ?

Hab. Transylvania.

Species 128. (Mus. Brit.)

CLAUSILIA CANALICULATA. *Cla. testâ brevi, pyramidatâ, anfractibus octonis, inferioribus latis; aperturâ latâ, subaureâ, subrotundâ, prope suturam canaliculatâ, sinuatâ, marginę crasso, plicâ columellari elevatâ, latâ.*

THE CHANNELLED CLAUSILIA. Shell short, pyramidal, whorls eight, lower broad; aperture broad, rather golden, rather rounded, channelled near the suture, sinuated, margin thick, columellar plait raised, broad.

PFEIFFER. Mon. Hel. III. 599.

Clausilia Eubœa. Parreys.

Hab. Eubœa.

Species 129. (Mus. Sowerby.)

CLAUSILIA REINIANA. *Cla. testâ magnâ, solidâ, subfusiformi, latâ, fuscâ, tenuissimè striatâ; anfractibus decenis, apicalibus quaternis brevibus, rotundis, medianis magnis, inflatis, ultimo maximo, infrà contracto; aperturâ magnâ, subauriformi, subauranliâ; plicâ parietali angusto, plicâ columellari parvâ, planatâ, subelevatâ, plicâ minutâ, infra columellam tenui.*

THE REINI CLAUSILIA. Shell large, solid, subfusiform, broad, brown, very finely striated; whorls ten, four apical short, round, middle large, inflated, last very large, contracted below; aperture large, subauriform, rather orange; parietal fold narrow, columellar plait small, flattened, rather raised; minute plait below the columella small.

KOBELL. —— ?

Hab. Japan.

Species 130. (Mus. Brit.)

CLAUSILIA SYRACUSANA. *Cla. testâ subfusiformi, pallidè fulvâ, laminis acutis rectis crebris liratâ; anfractibus decenis, apicalibus quaternis parvis, rotundis, lævibus; aperturâ subovatâ, margine expanso, albo; labio externo, supernè tumido, dentato, dente internè continuo, plicâ parietali minutâ, plicâ columellari crassâ, elevatâ; plicâ subinternâ obliquâ, ad marginem inferiorem desinenti.*

THE SYRACUSE CLAUSILIA. Shell subfusiform, pale fulvous, ridged with numerous sharp, straight laminæ; whorls ten, four apical small, rounded, smooth; aperture rather ovate, margin white, expanded; outer lip tumid above, toothed, inner lip continuous, parietal plait minute, columellar plait thick, raised; a subinternal oblique plait ending at the lower margin.

PHILIPPI. Pfeiffer Mon. Hel. IV. 739.

Clausilia macrostoma. Cantraine.

Clausilia inflata. Delle Chiaje.

Hab. Sicily.

Species 131. (Mus. Brit.)

CLAUSILIA SICULA. *Cla. testâ breviùsculâ, pallidâ, latâ, lævigatâ, medio et infrà ventricosâ; anfractibus paucis, tenuissimè striatis, fusco strigatis, ultimo elongato; aperturâ obliquâ, subauriformi, labio externo crasso, infrà subexpanso, columellâ triplicatâ.*

THE SICILIAN CLAUSILIA. Shell rather short, pale, broad, smooth, ventricose in the middle and below; whorls few, very finely striated, striped with brown, last elongated; aperture oblique, rather auriform, outer lip thick, expanded below, columella three-plaited.

BENOÎT. —— ?

Hab. Sicily.

Species 132. (Mus. Brit.)

CLAUSILIA RUGILABRIS. *Cla. testâ subfusiformi, brevi, lævi, corneâ et pruinosâ; anfractibus apicalibus parvis, rotundis; aperturâ latâ, margine crasso, albo, labio externo supernè tumido, sinuato; plicâ parietali acutâ; columellâ biplicatâ.*

THE ROUGH-LIPPED CLAUSILIA. Shell subfusiform, short, smooth, horny and plum-coloured; apical whorls small, round; aperture broad, margin thick, white, outer lip tumid above, sinuous; parietal fold sharp; columella with two plaits.

MOUSSON. Pfeiffer. Mon. Hel. VI. p. 475.

Hab. Near Janina, Greece.

Having a singularly broad and thick-lipped mouth.

Species 133. (Mus. Brit.)

CLAUSILIA STRAMINICOLLIS. *Cla. testâ pruinosâ, fusiformi, lævi, infra medium subventricosâ; anfractibus novenis, stramineo ad suturam tæniatis; aperturâ aurantiâ, oblongâ, posticè angustatâ et attenuatâ, labio interno biplicato.*

THE STRAW-NECKED CLAUSILIA. Shell plum-coloured, fusiform, smooth, ventricose below the middle; whorls nine, with a straw-coloured band at the suture; aperture orange, oblong, posteriorly narrow and attenuated, inner lip with two plaits.

PARREYS. Küster, Claus. p. 341.

Hab. Transylvania.

Species 134. (Mus. Sowerby ?)

CLAUSILIA CALCAREA. *Cla. testâ brevi, fusiformi, lævigatâ, corneâ; anfractibus undecenis, medianis et inferioribus altis, ventricosis; aperturâ magnâ, margine crasso; plicâ parietali parvâ, plicâ columellari elevatâ, plicâ subinternâ infrà prope columellam curvâ.*

THE CALCAREAN CLAUSILIA. Shell short, fusiform, smooth, horny; whorls eleven, middle and lower high, ventricose; aperture large, margin thick; parietal plait small, columellar plait raised, subinternal plait curved below near the columella.

PHILIPPI. Pfeiffer. Mon. Hel. II. 453.

Clausilia assimilis. Zeigler.

Hab. Sicily.

Species 135. (Mus. Brit.)

CLAUSILIA BILABIATA. *Cla. testâ subfusiformi, fulvâ, tenuiter striatâ; anfractibus paucis, inferioribus convexis, ventricosis; aperturâ subovatâ, prope suturam subacuminatâ; labio externo crasso, supra medium tumido, extùs duplicato; columellâ quadriplicatâ, plicâ superiori brevi, latâ, plicâ parietali productâ.*

THE DOUBLE-LIPPED CLAUSILIA. Shell subfusiform, fulvous, finely striated; whorls few, lower convex, ventricose; aperture subovate, slightly acuminated near the suture; outer lip thick, tumid above the middle, double outside; columella with four plaits, upper plait short, broad, parietal plait produced.

SMITH. Proc. Zool. Soc.

Hab. Japan.

136

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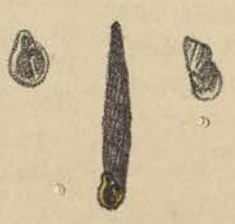

145

G.B. Sowerby. Del et lith.

Vincent Brooks Day & Son Imp.

CLAUSILIA.

PLATE XV.

Species 136. (Mus. Brit.)

CLAUSILIA FILOGRANA. *Cla. testâ parvâ, fusiformi, pruinosâ, tenuiter liratâ, liris filiformibus; aperturâ pallidè aurantiâ, parvâ, columellâ medio latè plicatâ, plicâ inferiori minutâ, plicâ parietali inconspicuâ, labio externo supernè acuminato, sinuato.*

THE THREAD-GRAINED CLAUSILIA. Shell small, fusiform, plum-coloured, finely ridged, ridges thread-like; aperture pale orange, small, columella broadly plaited in the middle, lower plait minute, parietal plait inconspicuous, outer lip acuminated above, sinuous.

ZEIGLER. Pffr. Mon. Hel. II. p. 409.

Clausilia interrupta. —— ?

Hab. Silesia, Croatia, Austria.

Species 137. (Mus. Brit.)

CLAUSILIA AQUILA. *Cla. testâ brevi, latâ, lævigatâ, supernè angustatâ, infrà ventricosâ, pallidè lilacinâ; aperturâ maximâ, aurantiâ; margine crasso, plicâ columellari magnâ, prominenti.*

THE EAGLE CLAUSILIA. Shell short, broad, smooth, narrow above, ventricose below, pale lilac; aperture very large, orange; margin thick, columella large, prominent.

PARREYS. Rossmäsler, Icon. III. p. 43.

Hab. Dalmatia.

Species 138. (Mus. Brit.)

CLAUSILIA CANA. *Cla. testâ brevi, ventricosâ, fusiformi, striatâ, fuscâ, maculis densioribus variegatâ; anfractibus novenis, superioribus attenuatis; aperturâ auriformi, plicâ parietali ad suturam approximatâ, plicâ columellari latè laminatâ.*

THE HOARY CLAUSILIA. Shell short, ventricose, fusiform, striated, brown, varied with darker coloured spots; whorls nine, upper attenuated; aperture ear-shaped, parietal plait near the suture, columellar plait broadly laminar.

HELDEMAN. Küst. p. 193.

Clausilia tessellata. Parreys ?

Species 139. (Mus. Brit.)

CLAUSILIA STIGMATICA. *Cla. testâ brevissimâ, ventricosâ, lævi; anfractibus medianis et inferioribus inflatis, ad suturam tuberculis parvis albis ornatis; aperturâ subquadratâ, magnâ, labio interno biplicato, supernè interrupto.*

THE STIGMATIC CLAUSILIA. Shell very short, ventricose, smooth, middle and lower whorls inflated, ornamented at the suture with small white tubercles; aperture rather square, large, inner lip two-plaited, interrupted above.

ZEIGLER. Pffr. Mon. Hel. II. 424.

Hab. Dalmatia.

Species 140. (Mus. Brit.)

CLAUSILIA BUSCHI. *Cla. testâ brevi, pyramidatâ, pallidè corneâ, lævi, semipellucidâ; anfractibus novenis, convexis; aperturâ parvâ, auriformi, plicis parietali et columellari parvis.*

BUSCH'S CLAUSILIA. Shell short, pyramidal, pale horny, smooth, semipellucid; whorls nine, convex; aperture small, auriform, parietal and columellar plaits small.

KÜSTER. Martens in Malak. Bl. VII.

Hab. Japan.

Species 141. (Mus. Brit.)

CLAUSILIA BORNEENSIS. *Cla. testâ altâ, pyramidali, fuscâ; anfractibus decenis, inflatis; aperturâ aurantiâ, auriformi, tortuosim versus latus dextrum productâ, supernè acuminatâ, margine crasso, labio interno biplicato.*

THE BORNEAN CLAUSILIA. Shell high, pyramidal, brown; whorls ten, inflated; aperture orange, ear-shaped, tortuously bent back towards the right side, acuminated above, margin thick, inner lip two-plaited.

PFEIFFER. Mon. Hel. IV. 736.

Hab. Borneo.

The mouth is peculiarly bent over towards the right side of the shell.

Species 142. (Mus. Brit.)

CLAUSILIA MACASCARIENSE. *Cla. testâ lilacinâ, subventricosâ, pyramido-fusiformi; anfractibus decenis, inferioribus altis, latis, rectilateralibus, ultimo elongato, ad medium dorsi depresso, liris inæqualibus, irregularibus rugato; aperturâ aurantiâ, magnâ, obliquâ, subauriformi, supernè acuminato, plicâ parietali acutâ productâ, plicâ columellari magnâ, angulatim productâ.*

THE MACASCAR CLAUSILIA. Shell lilac, subventricose, pyramidal, fusiform; whorls ten, lower high, broad, rectilateral, last elongated, depressed at the middle of the back, wrinkled with unequal irregular ridges; aperture orange, large, parietal plait sharply produced, columellar plait large, angularly produced.

SOWERBY.

Clausilia corrugata. Menke.

Clausilia Macarana. Zeigler.

Hab. Macascar.

Species 143. (Mus. Sowerby.)

CLAUSILIA DELESSERTII. *Cla. testâ fusiformi, pruinosâ, tenuissimè liratâ; anfractibus undecenis, albo marginatis, obliquis; ultimo propè terminum ad dorsum depresso et subcarinato; aperturâ prominenti, subovatâ, margine albo, lato, reflexo, plicâ columellari magnâ, obliquè productâ.*

DELESSERT'S CLAUSILIA. Shell fusiform, plum-coloured, finely ridged; whorls eleven, bordered with white, oblique; last depressed or partly keeled near the end at the back; aperture prominent, subovate, margin white, broad, reflected, columellar plait large, obliquely produced.

BOURGUIGNAT. Mon. Hel. IV. 774.

Hab. Syria.

Figure 144. (Mus. Brit.)

CLAUSILIA FUNICULUM. Already given in Plate VIII. f. 71, and repeated here by error.

Species 145. (Mus. Brit.)

CLAUSILIA CALLOSA. *Cla. testâ pruinosâ, laminatim tenuissimè liratâ, elongatâ, angustissimâ medio et infrà rectilaterali; anfractibus decenis, altis, ultimo elongato, ad dorsum infrà obliquè sulco impresso; aperturâ auriformi, infrà productâ, margine crasso, plicâ parietali minutâ, plicâ columellari obliquè acuminatâ; altissimâ, plicâ internâ conspicuâ.*

THE CALLOUS CLAUSILIA. Shell plum-coloured, with fine laminar ridges, elongated, very narrow, straight-sided in the middle and below; whorls ten, high, last elongated, impressed at the back below with an oblique groove; aperture auriform, produced below, margin thick, parietal plait minute, columellar plait obliquely acuminated, very high; a conspicuous inner plait.

MUHLFELDI. Pffr. Mon. Hel. II. 419.

Hab. Dalmatia.

146.

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B Sowerby, del et lith.

Vincent Brooks. Day & Son

CLAUSILIA.

PLATE XVI.

Species 146. (Mus. Sowerby.)

CLAUSILIA CINEREA. *Cla. testâ brevi, lævi, subcœruleâ, anfractibus octonis, apicalibus quaternis fusco-nigrescentibus, medianis et inferioribus subventricosis, ultimo profundè rimato, aperturâ pallidè castaneâ, latâ, rotundâ, margine tenui, parùm reflexâ, plicâ columellari elevatâ, lineari, plicâ parietali suturæ approximatâ, acutâ.*

THE ASHY CLAUSILIA. Shell short, smooth, blueish; whorls eight, four apical blackish brown, middle and lower rather ventricose, last deeply notched; aperture pale chestnut, broad, rounded, margin thin, a little reflected; columellar plait raised, linear parietal plait close to the suture, sharp.

PHILIPPI. A. Schmidt. Clausilia, p. 108.

Clausilia ominosa. Zeigler.

Clausilia teres. Delle Chiaje.

Hab. Naples.

Species 147. (Mus. Sowerby.)

CLAUSILIA COCHIN-CHINENSIS. *Cla. testâ breviùsculâ, solidâ, fusco-griseâ, tenuissimè, obliquè liratâ; anfractibus novenis, infrà latis, altis, convexiùsculis, ultimo profundè rimato; aperturâ auriformi, pallidè carneâ, supernè subacuminatâ, sinuatâ; margine crasso, reflexo, plicâ parietali parvâ, tenui, plicâ columellari magnâ, perelevatâ.*

THE COCHIN-CHINA CLAUSILIA. Shell rather short, solid, brownish-grey, very finely obliquely ridged; whorls nine, broad below, high, rather convex, last deeply notched; aperture auriform, pale flesh, rather acuminated above, sinuated; margin thick, reflected, parietal plait small, thin, columellar plait large, much raised.

PFEIFFER. Mon. Hel. VI. p. 443.

Hab. Cochin-China.

Species 148. (Mus. Sowerby.)

CLAUSILIA GOULDIANA. *Cla. testâ solidâ, pallidè fulvâ, lævi, fusiformi, ventricosissimâ; anfractibus septenis, inferioribus altis, convexis, ultimo obliquè contracto, suturâ distinctâ; aperturâ latâ, labio externo albo, crasso, latè reflexo, supernè sinuato, subemarginato, plicâ parietali prominenti, acutâ; plicâ columellari obliquâ, elevatâ, lineari.*

GOULD'S CLAUSILIA. Shell solid, pale fulvous, smooth, fusiform, very ventricose; whorls seven, lower high, convex, last obliquely contracted, suture distinct; aperture wide, outer lip white, thick, broadly reflected, sinuous above, subemarginate, parietal plate prominent, sharp; columellar plait oblique, elevated, linear.

PFEIFFER. Novil. Conch. p. 123.

Hab. Burmah.

Species 149. (Mus. Sowerby.)

CLAUSILIA TRISTRAMI. *Cla. testâ pruinosâ, fusiformi, tenuissimè liratâ; anfractibus tridecenis, superioribus lævibus, attenuatis, medianis et inferioribus ventricosis, ultimo divaricatim impresso; aperturâ castaneâ, margine albo, plicis parietali et columellari tenuibus.*

TRISTRAM'S CLAUSILIA. Shell plum-coloured, fusiform, very finely ridged; whorls thirteen, upper smooth, attenuated, middle and lower ventricose, last impressed divergently; aperture chestnut, margin white, parietal and columellar folds thin.

PFEIFFER. Mon. Hel. VI. p. 481.

Hab. Tunis.

The former figure of this species, given in Plate V., was not so characteristic as the present, which, however, is only introduced by inadvertence.

Species 150. (Mus. Sowerby.)

CLAUSILIA RAYMONDI. *Cla. testâ fulvâ, inter costas pruinosâ, costellis filiformibus liratâ, angustâ, rectilaterali, altâ; anfractibus decenis, medianis et inferioribus altis, ultimo infrà contracto, prolongato, laxato, tortuo, ad dorsum obliquè bicarinato; aperturâ distanti, productâ, auriformi, margine tenui expanso, plicis parietali et columellari tenuibus, approximatis.*

RAYMOND'S CLAUSILIA. Shell fulvous, plum-coloured between the ribs, ridged with filiform ribs, narrow, straight-sided, high; whorls ten, middle and lower high, last contracted, prolonged, uncoiled, tortuous, obliquely bicarinated at the back; aperture distant, produced, ear-shaped, margin thin and expanded, parietal and columellar plaits thin, close together.

BOURGUIGNAT. Pfeiffer. Mon. Hel. VI. p. 513.

Hab. Syria.

Species 151. (Mus. Sowerby.)

CLAUSILIA BOISSIERI. *Cla. testâ subcæruleâ, fusiformi, breviùsculâ, lævigatâ; anfractibns decenis, apicalibus fusco-nigrescentibus, medianis et inferioribus gradatim inflatis, ultimo prolongato, lirato, tortuo, laxato, carinis duabus convergentibus desinenti; aperturâ latâ, fulvâ, productâ, margine tenui, expanso, supernè sinuato, plicâ parietali minutâ, plicâ columellari altâ, prominenti.*

BOISSIER'S CLAUSILIA. Shell blueish, fusiform, rather short, smooth; whorls ten, apical blackish-brown, middle and lower gradually inflated, last prolonged, ridged, tortuous, uncoiled, ending in two converging keels; aperture broad, fulvous, produced, margin thin, expanded, sinuous above, parietal plait minute, columellar plait high, prominent.

CHARPENTIER. Pfr. Mon. Hel. p. 513.

Hab. Syria.

This species has a couple of wrinkled keels converging at the bottom of the last whorl.

Species 152. (Mus. Sowerby.)

CLAUSILIA VARIANS. *Cla. testâ pallidè corneâ, semipellucidâ, tenuissimè liratâ, tenui, subfusiformi, medio gradatim inflatâ; aperturâ subovatâ, parvâ, margine supernè sinuatim emarginato, plicis parietali et columellari tenuibus, subapproximatis.*

THE VARYING CLAUSILIA. Shell pale horn, semi-pellucid, very finely ridged, thin, subfusiform, gradually swelled in the middle; aperture sub-ovate, small, margin sinuously notched above, parietal and columellar plaits thin, rather approximate.

ZEIGLER. Pfr. Mon. Hel. II. p. 409.

Hab. Germany.

Species 153. (Mus. Sowerby.)

CLAUSILIA PROXIMA. *Cla. testâ brevi, ventricosâ, lævi, subcæruleâ, apice aperturâque succinneis; anfractibus octonis apicalibus parvis, medianis, inferioribusque latis, altis, inflatis; ultimo profundè rimato, ad dorsum perpendiculariter rugato; aperturâ latâ, subquadratâ, margine tenui, reflexo, plicâ parietali parvâ, plicâ columellari altâ, latâ.*

THE NEAR CLAUSILIA. Shell short, ventricose, smooth, blueish, apex and aperture amber; whorls eight, apical small, middle, lower broad, high, inflated; last deeply notched, perpendicularly wrinkled at the back; aperture broad, rather square, margin thin, reflected, parietal plait small, columellar plait high, broad.

WALDERDORFF. Syst. Verz. Call. 1864.

Hab. Cattar.

Species 154. (Mus. Sowerby.)

CLAUSILIA LUNELLARIS. *Cla. testâ parvâ, fulvâ et pruinosâ, brevi, tenuissimè striatâ; anfractibus novenis, inferioribus inflatis, altis; ultimo rimato, ad dorsum maculâ semilunari notato; aperturâ fulvâ, margine paulò expanso, supernè sinuato, emarginato, plicis parietali et columellari minutis, approximatis.*

THE LUNELLAR CLAUSILIA. Shell small, fulvous and plum-coloured, short, very finely striated; whorls nine, lower inflated, high, last notched, marked at the back with a semilunar spot, aperture fulvous, margin a little expanded, sinuous, emarginated, parietal and columellar plaits minute, near together.

PFEIFFER. Mon. Hel. III. p. 608.

Clausilia lunularis by error, Pl. IV. 38.

Hab. Eubœa.

Species 155. (Mus. Sowerby.)

CLAUSILIA BLANDIANA. *Cla. testâ brevi, sordidè pruinosâ, tenuissimè striatâ, subfusiformi; anfractibus septeni, suturâ profundâ separatis, convexis, ultimo altissimo, prolongato, profundè rimato, laxato, tortuo; aperturâ magnâ, castaneâ, obliquè auriformi, trans latus dextrale extenso, expanso; plicâ parietali prominenti, plicâ columellari nullâ.*

BLAND'S CLAUSILIA. Shell short, dull plum-colour, very finely striated, rather fusiform; whorls seven, separated by a deep suture, convex, last very high, prolonged, deeply notched, uncoiled, tortuous; aperture large, chestnut, obliquely auriform, extended across the right side, expanded, parietal plait prominent, no columellar plait.

PFEIFFER. Mon. Hel. IV. p. 785.

Hab. Santa de Bogota, Columbia.

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G.B. Sowerby, del et lith.

Vincent Brooks, Day & Son, Imp.

CLAUSILIA.

PLATE XVII.

Species 156. (Mus. Sowerby.)

CLAUSILIA CÆRULEA. *Cla. testâ brevi, subcœruleâ, lævi, fusiformi; anfractibus decenis, medianis et inferioribus inflatis, apicalibus parvis, nigrescentibus, ultimo infrà producto, angustato, rugato, ad dorsum tuberculato; aperturâ intùs castaneâ, margine aureo-fulvâ, obliquâ, margine tenui, reflexo.*

THE BLUEISH CLAUSILIA. Shell short, blueish, smooth, fusiform; whorls ten, middle and lower inflated, apical small, blackish; last produced below, narrow, wrinkled, with two tubercles; aperture chestnut within, margin golden-fawn, oblique, margin thin, reflected.

FERRUSSAC. Küster, p. 216.

Clausilia birugosa.

Hab. Morea.

Species 157. (Mus. Sowerby.)

CLAUSILIA DALMATINA. *Cla. testâ brevissimâ, ventricosâ, pallidè fulvâ, tenuissimè striatâ; anfractibus octonis, brevibus, ultimo alto, infrà angustato, post marginem aperturæ unirugato, dorso albo notato; aperturâ latâ, margine albo, expanso, plicâ columellari latâ.*

THE DALMATIAN CLAUSILIA. Shell very short, ventricose, pale fulvous, very finely striated; whorls eight, short, last high, narrow below, with a wrinkle behind the margin of the mouth; marked with white at the back, aperture broad, margin white, expanded, columellar plait broad.

PARTSCH. Pfeiffer. Mon. Hel. II. 432.

Clausilia marmorata. Zeigler.

Clausilia epidaurica. Kutsch.

Hab. Dalmatia.

Species 158. (Mus. Brit.)

CLAUSILIA CRITICA. *Cla. testâ parvâ, tenuiter liratâ, stramineâ, fusiformi; aperturâ subovatâ, supernè sinuatâ, plicâ parietali suturâ approximatâ, columellâ biplicatâ, labio externo supra medium sinuato.*

THE CRITICAL CLAUSILIA. Shell small, finely ridged, straw-coloured, fusiform; aperture subovate, sinuous above, parietal plait near the suture, columella two-plaited, outer lip sinuated above the middle.

BIELTZ. Küster, p. 263.

Hab. Transylvania.

Species 159. (Mus. Brit.)

CLAUSILIA DUBOISII. *Cla. testâ parvâ, fulvâ, fusiformi, tenuiter laminatim liratâ; aperturâ ovatâ, labio externo supra medium tumido, sinuato; columellâ infra plicam crenulatâ, plicis parietali et columellari ad terminas approximatis, plicâ parvâ intermediâ.*

DUBOIS'S CLAUSILIA. Shell small, fulvous, fusiform, finely laminately ridged; aperture ovate, outer lip tumid and sinuous above the middle, columella crenulated below the plait, parietal and columellar plaits approximated at the ends with a small intermediate plait.

CHARPENTIER. Küster, p. 270.

Hab. —— ?

Species 160. (Mus. Sowerby.)

CLAUSILIA DISTANTILIRATA. *Cla. testâ brevi, subpyramidatâ, solidâ, latâ, costis distantibus, crassiusculis liratâ, inter costas pruinosâ, anfractibus novenis, apicalibus parvis, rotundis, fuscis, lævibus, alteris ad suturam subscalatis, aperturâ subaurantiâ, plicâ parietali parvâ, plicâ columellari nullâ.*

THE DISTANT-RIDGED CLAUSILIA. Shell short, pyramidal, solid, broad, ridged with distant, rather thick ribs, plum-coloured between the ribs; whorls nine, apical small, round, brown, smooth, others with slight steps at the suture; aperture slightly orange, parietal plait small, columellar plait none.

SOWERBY.

Hab. —— ?

Species 161. (Mus. Sowerby.)

CLAUSILIA KÜSTERI. *Cla. testâ tenui, corneâ, subfusiformi, lævi, anfractibus duodecenis, apicali turbinato, ultimo infrà subattenuato; aperturâ oblongâ, ad suturam elevatâ, plicâ columellari magnâ.*

Küster's Clausilia. Shell thin, horny, subfusiform, smooth, whorls twelve, apical turbinated, last attenuated below; aperture oblong, raised at the suture; columellar plait large.

Rossmässler. Pfeiffer. Mon. Hel. II. 399.

Clausilia substriata. Küster?

Hab. Sardinia, Corsica.

Species 162. (Mus. Brit.)

Clausilia septemplicata. *Cla testâ fuscâ, lævi, fusiformi, medio ventricosâ; anfractibus novenis, ad suturam minutè albo tuberculatis, ultimo prolongato, ad dorsum stigmate albo elongato flexuoso notato; aperturâ magnâ, margine albo, plicâ parietali minutâ, plicâ columellari elongato, plicis internis et subinternis quinis.*

The seven-plaited Clausilia. Shell brown, smooth, fusiform, middle ventricose; whorls nine, with minute white tubercles at the suture, last prolonged, marked at the back with a white, long, flexuous stigma; aperture large, margin white, parietal plait minute, columellar plait elongated, interior and subinterior plaits five.

Philippi. Pfr. Mon. Hel. II. p. 452.

Clausilia prasina. Benson.

Clausilia sublævis. Zeigler.

Clausilia sericina. Rossmässler.

Hab. Sicily.

Species 163. (Mus. Sowerby.)

Clausilia montana. *Cla. testâ parvâ, pruinosâ, tenuissimè striatâ, fusiformi; anfractu ultimo ad dorsum infrà subcarinato, ante aperturam tumido, tum coarctato, aperturâ fulvâ, oblongâ, plicâ internâ perpendiculari, columellâ biplicatâ.*

The Mountain Clausilia. Shell small, plum-coloured, very finely striated, fusiform; last whorl with a keel at the back below, tumid before the aperture, then drawn in; aperture fulvous, oblong, with a perpendicular internal plait; columella two-plaited.

Mousson. —— ?

Hab. Mountains in Europe.

Species 164. (Mus. Sowerby.)

Clausilia Lowei. *Cla. testâ parvâ, pruinosâ, subdistanter liratâ, liris filiformibus; anfractibus decenis, medianis inferioribus convexis; aperturâ subaureâ, multiplicatâ.*

Lowe's Clausilia. Shell small, plum-coloured, rather distantly ridged, ridges filiform; whorls ten, middle and lower convex; aperture pale orange, many-plaited.

Albers. Küster, p. 177.

Clausilia deltostoma. De Paiva.

Hab. Madeira.

Species 165. (Mus. Sowerby.)

Clausilia vibex. *Cla. testâ brevi, ventricosâ, pallidè pruinosâ; anfractibus novenis, ad suturam minutissimè plicatis, ultimo profundè rimato, infrà subcarinato; aperturâ magnâ, margine tenui, expanso, plicis parietali et columellari crassis; labio externo supernè incrassato.*

The bruise-mark Clausilia. Shell short, ventricose, pale plum-colour; whorls nine, very finely plaited at the suture, last deeply notched, with a slight keel below; aperture large, margin thin, expanded, parietal and columella thick, outer lip thickened above.

Rossmässler. Pfeiffer. Mon. Hel. II. p. 455.

Clausilia diplana. Heutz.

Hab. Central Croatia.

CLAUSILIA.

	Plate.	Species.
abietana, Dupuy	IX.	77
aculus, *Adam*	X.	94
albocincta, *Pfr. lævissima*		
alboguttulata, Meyner	VI.	56
anatolica, *Rothman*	II.	11
anceps, *Zeigler*	IV.	30
angustata, *Bielz*	VI.	50
aquilla, *Parreys*	XV.	137
Arakana, *Theobald*	IX.	78
assimilis, Zeigler	XIV.	134
bacillum, *Benson*	VI.	48
Badia, *Zeigler*	XII.	117
Bartletti, *A. Adams*	I.	2
Belcheri, *Pfeiffer*	XII.	107
Bergeri, *Mayer*	XI.	103
Bengalensis, Busch	VII.	61
bidens, *Linnæus*	IX.	76
bidentula, *Mörch*	IV.	31
Bielzi, *Parreys*	III.	23
binotata, *Rossmäsler*	VI.	55
bilabiata, *Wagner*	VII.	57
bilabrata, *Smith*	XIV.	135
biplicata, *Montague*	I.	3
bipustulata, Küster	VI.	55
Blanda, *Zeigler*	VIII.	68
Blandiana, *Pfeiffer*	XVI.	155
Boissieri, *Charpentier*	XVI.	151
Borneensis, *Pfeiffer*	XV.	141
bulbus, *Benson*	VI.	51
Buschii, *Küster*	XV.	140
cœrulea, *Ferrussac*	XVII.	156
calcaræ, *Philippi*	XIV.	134
callosa, *Muhlfeldt*	XV.	145
cambojensis		
Cana, *Heldeman*	XV.	138
canaliculata, *Pfeiffer*	XIV.	128
candidilabris, *Porro*	II.	17
cattaroensis, *Zeigler*	VII.	64
castanea, *Küster*	VIII.	68
castalia, *Roth*	XIII.	125
cecillei, *Philippi*	IX.	80
cerea, Menke	VI.	49
Charpentieri-cattaroensis		
Chersonensis, Ferrussac	V.	41
cinerea, *Schmidt*	XVI.	146
clathrata, Rossmäsler	III.	23
claviformis, *Pfeiffer*	XII.	108
Cochin-chinensis, *Pfeiffer*	XVI.	147
colbeaniana-plumbea		
commutata, *Rossmäsler*	IX.	85
compressa, *Pfeiffer*	XII.	113
concilians-pagana		
consentanea, Zeigler	VI.	55
conspersa, *Parreys*	IV.	29
consimilis, *Zeigler*	IV.	30
contaminata, *Zeigler*	XIV.	126
cornea-binolabra		
corpulenta, *Kutschiz*	XIII.	124
corrugata, Menke	XV.	142
corticina, *Von Busch*	XIII.	123
corticolla, Parr	XIII.	124
costulata, Wood	I.	1
crassicostata, *Benoit*	VIII.	74
crenata, Menke	VI.	56
crenulata, Ferrussac	V.	45
crispa, *Lowe*	III.	26
critica, *Bielz*	XVII.	158
cruda, Schmidt	XIII.	117
cyclostoma, *Pfeiffer*	VII.	63
cylindrellæformis, *Bourguignat*	III.	22
cylindrica, Hanley	VII.	65
cylindrica, *Gray*	II.	18
cumingiana, *Pfeiffer*	X.	88
dacia, *Frivaldsky's*	XI.	96
Dalmatinæ, *Partsch*	XVII.	157
decipiens, Zeigler	III.	19
decorata, Zeigler	II.	15
Delessertii, *Bourguignat*	XV.	143
deltostoma, *Lowe*	III.	28
Democletiana, *Menke*	VI.	54
denegabalis, Zeigler	II.	14
denticulata		
deplana, Stentz	XVII.	165
derugata, Jeffreys	II.	13
dilyma, Parreys	IV.	31
discolor, *Pfeiffer*	III.	20

	Plate.	Species.
distantilibrata, *Sowerby*	XVII.	160
distans, *Pfeiffer*	XII.	112
Dohrnii, *Pfeiffer*	IX.	81
Duboisii, *Charpentier*	XVII.	159
dubia, *Draparnaud*	IX.	77
elata-somchetica		
elegantula, Parreys	IV.	31
elegans, *Bielz*	II.	12
elongata, Cantraine	III.	27
epidaurica, Kutsch	XVII.	157
Eubœa, Parreys	XIV.	128
exarata, *Zeigler*	II.	14
exilis (succineata var.), Lowe	XII.	106
excavata		
excellens, *Pfeiffer*	X.	89
exigua		
exilis, *Adams*	I.	8
fasciolaris, Parreys	V.	41
fallax, *Rossmässler*	III.	19
filiformis, Parreys	V.	39
filograna, *Zeigler*	XV.	136
fimbriata, *Muhlfeldt*	VIII.	67
fluviatilis, *Benson*	X.	91
fontana, Schmidt	XIII.	117
formosa		
Formosenses, *H. Adams*	I.	4
Fortunei, *Pfeiffer*	XI.	102
Frauenfeldi, *Zelebor*	XI.	99
Freyerii, Küster	III.	27
fulcrata		
fulginea, Parreys	II.	15
funiculum, *Crosse*	VIII.	71
fusiformis, *Blanford*	VII.	62
gastrolepa, *Zeigler*	III.	27
glabrata, Muhlfeldt	II.	15
Gouldiana, *Pfeiffer*	XVI.	148
gracile, Pfeiffer	IX.	77
gracilicosta, *Kryn*	VIII.	73
granatina, Zeigler	II.	13
grossa, Parreys	IV.	30
Hanevi, *Bielz*	XII.	115
Hindobonensi, Pfeiffer	IX.	77
honorifica, Parreys	VII.	58
Idæa, *Pfeiffer*	XII.	111
imbecilis, Parreys	III.	27
index, *Mousson*	IX.	79
inflata, *Delle*	XIV.	130
insignis, *Gould*	VI.	53
intercedens, Schmidt	II.	12

	Plate.	Species.
interrupta	XV.	136
irregularis, Zeigler	XI.	97
Itala, *Martens*	VI.	56
Javana, *Pfeiffer*	IV.	33
Jos, *Benson*	VIII.	75
Kobensis, *Smith*	X.	92
Küsteri, *Rossmässler*	XVII.	161
Kutschii, *Küster*	XIII.	124
labiata, Sowerby	I.	1
labiocrassa, Muhlfeldt	VII.	57
lævigata, Muhlfeldt	VII.	64
lævigata, Muhlfeldt	II.	15
lævissima, *Zeigler*	II.	15
lamellata, Leach	II.	13
laminata, *Montagu*	II.	13
latilabris, Muhlfeldt	II.	17
latistriata, Parreys	IV.	34
lerosicensis, *Ferrussac*	XI.	105
lesinacensis, *Parreys*	VII.	64
lineolata, *Pfeiffer*	IV.	36
Lischeana, Bielz	XIII.	116
litigiosa, *Zeigler*	IV.	30
livens, *Bielz*	XIII.	116
Lowei, *Küster*	XVII.	164
loxostoma, *Benson*	VII.	61
lucida, Menke	II.	13
lucostigma, *Zeigler*	II.	17
lunellaris, *Pfeiffer*	XVI.	154
Macarana	I.	7
Macascarensis, *Sowerby*	I., XV.	7, 142
Macrostoma, Cantraine	XIV.	130
Marcelia, Risso	IV.	31
madensis, *Fussendorf*	XIV.	127
magnifica, Parreys	VII.	58
marginata, *Zeigler*	VI.	54
Maranhiensis, *Albers*	XIII.	122
marmorata, Parreys	VI.	49
Masoni, *Theobald*	VIII.	69
Meisneriana, *Shuttleworth*	X.	87
maxima, Parreys	IV.	30
mediterranea, Gray	IX.	76
minima, Parreys	III.	21
Molluccensis=commutata		
Montague, Gray	I.	3
Montana, *Mousson*	XVI.	163
Mortilleti, Dumont	III.	24
Mouhoti, *Pfeiffer*	II.	16
muralis, Studer	IV.	30
nigricans, *Pulteney*	IV.	31

	Plate.	Species.
nitida, Muhlfeldt	V.	41
nympha, Parreys	VIII.	66
obscura, Parreys	III.	19
obtusa, Pfeiffer	IV.	31
odontosa, anceps	IV.	30
Olivieri, *Roth*	IV.	37
Olympiæ, *Frivoldti*	X.	95
ominosa, Zeigler	XVI.	146
opalina, Zeigler	II.	17
orthostoma, *Menke*	V.	3
ovata, *Blanford*	VII.	60
pachygastris		
pagana, *Zeigler*	X.	100
papillaris, Bruguière	IX.	76
paradoxica, *Zeigler*	IV.	30
Parreysii, *Zeigler*	VI.	49
parvula, *Studer*	III.	21
perarata, *Martini*	XIII.	119
Phalerata, Zeigler	VIII.	67
Phædusæ, *A. Adams*	I.	5
Philippiana, *Pfeiffer*	IV.	35
pikermaniana		
petrosa, *Parreys*	XII.	110
planilabris, Rossmässler	VII.	57
Plattydera, *Martens*	X.	90
plicata, *Draparnaud*	IV.	30
plicatula, *Montague*	X.	86
plicosa, Ferrussac	IV.	30
plebeja, Zeigler	IV.	30
plumbea, *Rossmässler*	V.	40
porcata, Zeigler	VII.	73
prasina, Benson	XVII.	102
proxima, *Walderdorff*	XVI.	153
prunilia, Parreys	V.	41
pulverosa, Parreys	IV.	30
punctata, Michaud	VI.	56
pygmæa, pygmæa	V.	41
pyrenaea, Charpentier	V.	45
ravida, Zeigler	VIII.	73
Raymondi, *Bourguignat*	XVI.	150
Reboudii, Charpentier	V.	45
reflexa, Zeigler	VII.	57
reflexilabris, Cantraine	VII.	57
regalis=plumbea.		
Rewiana, *Kobelt*	XIV.	129
relusa, Parreys	V.	42
Rolphii, *Leach*	III.	24
rudis, *Pfeiffer*	XII.	189
rugata, Parreys	V.	41

	Plate.	Species.
rugilabris, Mousson	XIV.	132
rugosa, *Draparnaud*	V.	44
rustica, Zeigler	IV.	30
Sandbergeri, *Mousson*	VIII.	70
Sanderii, *Küster*	VII.	58
satelles, Schundl	III.	24
saturata, Zeigler	VIII.	67
scalaris, *Pfeiffer*	XII.	114
Schelectii, Zeleb.	IX.	77
Schmidti, *Pfeiffer*	XIII.	11
Seiversi, *Pfeiffer*	IX.	84
semidenticulata, *Pfeiffer*	XI.	101
semilamellata, *Mousson*	IX.	83
semirugata, *Zeigler*	V.	41
sericata, *Pfeiffer*	XI.	104
sericina, Rossmässler	XVII.	162
septemplicata, *Philippi*	XVII.	162
Shanghaiensis, *Pfeiffer*	V.	46
sicula, *Benoit*	XIV.	131
Sieboldti, *Pfeiffer*	XIII.	121
Somchetica, *Pfeiffer*	XI.	98
speciosa, Pfeiffer	IX.	77
stigmatica, *Zeigler*	XV.	139
Stimpsoni, *Adams*	V.	47
strangulata, *Ferrussac*	V.	42
striatocollis, Parreys	VIII.	66
straminicollis, *Parreys*	XIV.	133
strigata, Muhlfeldt	VIII.	68
styriaca, Parreys	VIII.	67
substriata, Küster	XVII.	161
sublævis, Zeigler	XVII.	162
succineata, Zeigler	VIII.	66
sulcitana, Gené	IX.	76
sulcosa, *Wagner*	XI.	97
sumatrana, *Martens*	VII.	59
superstructa, Parreys	II.	15
Swinhœi, *Pfeiffer*	III.	25
syracusana, *Philippi*	XIV.	130
tabida, Küster	III.	27
tæniata, Zeigler	V.	39
taurica		
Taylori, *Pfeiffer*	I.	6
tenuis, Parreys	III.	23
teres, *Olivier*	XIII.	120
Tettlebachianæ, Pfeiffer	IX.	77
torticollis, *Olivier*	II.	10
Transylvania, Stentz	II.	13
tridens *Chemnitz*	I.	1
Tristani, *Pfeiffer*	V., XVI.	45

	Plate.	Species.
tuba, *Hanley*	VIII.	72
turritella, *Sowerby*	VII.	65
vallata, *Mousson*	V.	43
valida, *Pfeiffer*	VI.	52
varians, *Zeigler*	XVI	152
vellata, *Adams*	V.	43
ventricosa, *Draparnaud*	IV.	34
ventricosa=Montana.		
vetusta, *Zeigler*	X.	93
virens, Muhlfeldt	VIII.	67
virgata, Jan.	IX.	76
vitrea, Bielz	VI.	54
vitræa, Stentz	IX.	76
Walderdorfii=Gouldiana.		
Yokohamensis, *Crosse*	IX.	82

MONOGRAPH

OF THE GENUS

CYLINDRELLA.

O LORD of heaven, and earth, and sea,
To Thee all praise and glory be;
How shall we show our love to Thee,
Who givest all?

Bishop Christopher Wordsworth.

1a.

2.

1b.

3.

4.

5.

7.

6.

Sowerby del et lith.

Vincent Brooks Day & Son Imp

CYLINDRELLA.

PLATE I.

Genus CYLINDRELLA, *Pfeiffer*.

Testa terrestris, elongato-turrita, plerùmque dextralis; anfractibus numerosis, apicalibus, deciduis; aperturâ plerùmque ovatâ, margine continuo.

Shell terrestrial, elongate-turreted, generally dextral; whorls numerous, apical, deciduous; aperture usually ovate, with continuous margin.

The *Cylindrellæ* are much more variable in form than the *Clausiliæ*, and are without the internal plate or *clausium* which distinguish that genus. The first-formed whorls generally fall off when the shell is advanced in growth. In many species the aperture is brought round suddenly, so as to form a sort of crease (*rima*) with the coiled part of the body-whorl. In others the last whorl is distorted or uncoiled (*solutus*), so as to place the aperture at a distance from the body of the shell. In a very few, the margin of the aperture is interrupted by the ventral bulge of the whorl. Considerably more than one-third of the reported species are from the island of Cuba, one-fifth from Jamaica; another fifth would be made up between Haiti and Mexico; leaving very few for a dozen other isolated localities, including Great Britain, which produces four or five.

Species 1. (Mus. Brit.)

CYLINDRELLA ASPERA. *Cyl. testâ solidâ, pupæformi, albidâ vel roseâ, striatâ, versus apicem pyramidatâ; medio et infrà cylindricâ; anfractibus sexdecenis, apicalibus inclusis, ultimo rimato; aperturâ subrotundâ, margine crasso, columellâ intùs plicatâ.*

THE ROUGH CYLINDRELLA. Shell solid, pupiform, whitish or rose, striated, pyramidal towards the apex, cylindrical in the middle and below; whorls sixteen (including apical), last notched; aperture rather round, margin thick, columella plaited within.

ADAMS. Pfeiffer, Mon. III. p. 564.

Hab. Jamaica.

Species 2. (Mus. Brit.)

CYLINDRELLA SPECIOSA. *Cyl. testâ magnâ, solidiùsculâ, cylindrico-subpyramidatâ, obliquè striatâ, olivaceâ, ventricosâ; anfractibus permanentibus undecenis, paulò convexis, ad suturam crenatis, quinis inferioribus subæqualibus, ultimo angulato, contracto, longè rimato, supra aperturam arcuato; aperturâ auriformi, margine superiori subflexuoso, columellâ vix plicatâ.*

THE SPECIOUS CYLINDRELLA. Shell large, rather solid, cylindrico-subpyramidal, obliquely striated, olive, ventricose; permanent whorls eleven, a little convex, crenated at the suture, five lower nearly equal, last angular, contracted, with a long crease, arched above the aperture; aperture auriform, upper margin rather flexuous, columella hardly plaited.

DUNKER. Pfeiffer, Mon. IV. p. 695.

Hab. Columbia.

This handsome species loses its primary whorls far down from the apex, so as to make a broadly-truncated break.

Species 3. (Mus. Brit.)

CYLINDRELLA SPLENDIDA. *Cyl. testâ ventricosâ, solidiùsculâ, obliquè costatâ, corneo-violaceâ; anfractibus permanentibus octonis, medianis inflatis, ultimo contracto, longè rimato, supra marginem aperturæ arcuato; aperturâ auriformi, columellâ leviter biplicatâ.*

THE SPLENDID CYLINDRELLA. Shell ventricose, rather solid, obliquely ribbed, fleshy violet; permanent whorls eight, middle inflated, last contracted, with a long notch, arched above the margin of the aperture; aperture auriform, columella slightly biplicated.

PFEIFFER. Proc. Zool. Soc. 1860, p. 139.

Hab. Mexico.

Species 4. (Mus. Brit.)

CYLINDRELLA GRANDIS. *Cyl. testâ magnâ, cylindricâ, latâ, tenuiùsculâ, tenuiter striatâ, fusco-rubescenti, suturâ albido-marginatâ; anfractibus permanentibus octonis, altis, quaternis inferioribus subæqualibus, ultimo contracto, angulato, profundè rimato; aperturâ magnâ, latè subovatâ; columellâ rectiùsculâ.*

THE LARGE CYLINDRELLA. Shell large, cylindrical, broad, finely striated, reddish-brown, suture bordered with whitish; permanent whorls eight, high, the four lower nearly equal, last contracted, angular, deeply notched; aperture large, broadly subovate; columella rather straight.

PFEIFFER. Proc. Zool. Soc. 1860, p. 139.

Hab. Mexico.

Much more cylindrical than the preceding, and more finely sculptured.

Species 5. (Mus. Brit.)

CYLINDRELLA ARISTISPICA. *Cyl. testâ solidâ, subpyramidatâ, infra medium tumidâ, fusco-olivaceâ, fusco-rubescenti strigatâ, regulariter striatâ, supernè contractâ, medio et infrà subventricosâ; anfractibus permanentibus sexdecenis, depressis, ultimo contracto, rimato; aperturâ subrotundâ, margine crasso, rotundo, columellâ subplicatâ.*

THE CORN-SPIKE CYLINDRELLA. Shell solid, rather pyramidal, tumid below the middle, olive-brown, striped with reddish-brown, regularly striated, contracted above, rather ventricose in the middle and below; permanent whorls sixteen, depressed, last contracted, notched; aperture roundish, margin thick, round, columella slightly plaited.

PFEIFFER. ? MS. Mus. Brit.

Hab. —— ?

Species 6. (Mus. Brit.)

CYLINDRELLA EXIMIA. *Cyl. testâ solidâ, cylindricâ, rectigonâ, lœvigatâ, griseâ, supra suturam fascia-fulvâ, maculis rubris articulatâ, infra suturam fascia-fulvâ, immaculatâ, ornatâ; anfractibus permanentibus octonis, ultimo angulato, subcontracto; aperturâ subtrapezoidâ.*

THE EXQUISITE CYLINDRELLA. Shell solid, cylindrical, straight-sided, smooth, grey, ornamented above the suture with a fulvous band articulated with red spots, and under the suture with a spotless fulvous band; permanent whorls eight, last angular, rather contracted; aperture subtrapezoidal.

PFEIFFER. Proc. Zool. Soc. 1858, p. 23.

Hab. Haiti.

Species 7. (Mus. Brit.)

CYLINDRELLA GHEISBREGHTI. *Cyl. testâ magnâ, solidâ, fumoso-fuscâ, medio et infrà latâ, bulbosâ, supernè contractâ; sulcis irregulariter undatis rugatâ; anfractibus permanentibus sexdecenis, superioribus senis angustis, alteris gradatim crescentibus, ultimo infrà contracto, angulato, rimato, supra marginem superiorem aperturæ fornicato; columellâ uniplicatâ.*

GHEISBREGHT'S CYLINDRELLA. Shell large, solid, smoky-brown, broad and bulbous in the middle and below, contracted above, wrinkled with irregular, wavy grooves; permanent whorls sixteen, upper six narrow, others gradually increased, last contracted below, angular, notched, vaulted above the upper margin of the aperture; columella single-plaited.

PFEIFFER. Mon. IV. p. 694.

Hab. Chiapa, Mexico.

A large shell of remarkably bulbous form and wrinkled texture.

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9b.

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Sowerby del et Lith.

Vincent Brooks Day & Son Lith.

CYLINDRELLA.

PLATE II.

Species 8. (Mus. Brit.)

CYLINDRELLA FLAMMULATA. *Cyl. testâ pupæformi, solidâ, griseâ, fusco-corneo flammulatâ, lævigatâ; anfractibus rectiùsculis, ultimo contracto, angusto, 5 medianis subæqualibus, deinde versùs apicem contractis; labio integro subrotundo, simplici.*

THE FLAMED CYLINDRELLA. Shell pupa-shaped, solid, grey with horn-brown flames, smooth; whorls rather straight, the last contracted, narrow, five middle nearly equal, thence towards the apex contracted; lip entire, rather round, simple.

PFEIFFER. Monograph ii.

Cylindrella planulata, Pfeiffer.

Hab. Hayti—St. Domingo.

Species 9. (Fig. *a*, *b*, Mus. Brit.)

CYLINDRELLA CYLINDRUS. *Cyl. testâ pupæformi, tenuiter striatâ, roseâ, purpureâ vel albidâ, anfractibus rectiùsculis, ultimis 5 subæqualibus, deinde versùs apicem contractis; aperturâ productâ, labio simplici, columellâ intùs planatâ.*

THE CYLINDER CYLINDRELLA. Shell pupa-shaped, finely striated; pink, purple, or white whorls rather straight, five last nearly equal, thence towards the apex contracted; aperture produced; lip simple; columella flattened within.

CHEMNITZ. Conchological Cabinet.

Cylindrella purpurea, Gray.

Pupa rosea, Adams.

Cylindrella rubella, Adams.

Cylindrella procera, Adams.

Hab. Jamaica.

Species 10. (Mus. Brit.)

CYLINDRELLA ZONATA. *Cyl. testâ pupæformi, tenuiter striatâ, purpureâ, purpureo-nigrescenti latè zonatâ; anfractibus latis, altis, 5 ultimis subæqualibus, deinde gradatim contractis; aperturâ subproductâ, subauriformi, intùs flexuosâ, labio rotundo.*

THE BANDED CYLINDRELLA. Shell pupa-shaped, finely striated, purple, broadly banded with blackish-purple; whorls broad, elevated, five last nearly equal, then gradually contracted; aperture rather produced, rather auriform, flexuous within, lip rounded at the margin.

C. B. ADAMS. Pfeiffer's Monograph.

Hab. Jamaica.

Species 11. (Mus. Brit.)

CYLINDRELLA ROSEA. *Cyl. testâ angustâ, cylindricâ, acutè tenuiter striatâ, roseâ, anfractibus rectiùsculis; 5 ultimis subæqualibus, ultimo infrà contracto; aperturâ vix solutâ, aperturâ subquadratâ; columellâ intùs latâ.*

THE PINK CYLINDRELLA. Shell narrow, cylindrical, sharply and finely striated, pink, whorls rather straight; five last whorls rather equal, last contracted below; aperture scarcely uncoiled, aperture rather square; columella broad within.

CHEMNITZ. Conch. tab. 2, f. 31, 32.

Hab. Jamaica.

In this species, as in *C. aspera*, the striæ are sharp and fine.

Species 12. (Mus. Brit.)

CYLINDRELLA SANGUINEA. *Cyl. testâ subpupæformi, sanguineâ, tenuiter striatâ, medio subinflatâ, versùs apicem contractâ; anfractibus depressis, numerosis; aperturâ subquadratâ, labio incrassato.*

THE SANGUINEOUS CYLINDRELLA. Shell rather pupa-shaped, blood-coloured, finely striated, a little inflated in the middle, contracted towards the apex; whorls depressed, numerous; aperture rather square, lip thickened.

CHEMNITZ. Conch. 7, t. 1, figs. 18–20.

Cylindrella cornea, Adams.

Hab. Jamaica.

Species 13. (Mus. Brit.)

CYLINDRELLA OVIEDOIANA. *Cyl. testâ elongato-cylindricâ, versùs apicem gradatim attenuatâ, corneâ, medio rubrâ, striis rectiùsculis tenuiter liratâ; ultimo anfractu alto; aperturâ lateraliter productâ, rotundâ, margine integro, rotundo.*

THE OVIEDO CYLINDRELLA. Shell elongated-cylindrical, gradually attenuated towards the apex, horny, red in the middle, finely ridged with rather straight striæ; last whorl elevated; aperture laterally produced, rounded, margin entire, rounded.

D'ORBIGNY. Mollusca of the Isl. of Cuba, tab. 12, f. 15–17.

Hab. Cuba.

Species 14. (Mus. Brit.)

CYLINDRELLA PROCERA. *Cyl. testâ ventricosâ, pupæformi, tenuissimè striatâ; anfractibus 4 ultimis subæqualibus, altis, latis, deinde alteris gradatim angustioribus; aperturâ rotundo-subquadratâ; columellâ leviter plicatâ, labio crasso, rotundo.*

THE ELEVATED CYLINDRELLA. Shell ventricose, pupa-shaped, very finely striated; four last whorls nearly equal, elevated, broad, thence others gradually narrowing; aperture roundly-subquadrate; columella lightly plaited, lip thick, round.

C. B. ADAMS. Shells of Jamaica.

Hab. Jamaica.

Species 15. (Mus. Brit.)

CYLINDRELLA AMETHYSTINA. *Cyl. testâ cylindricâ, rectiùsculâ lævigatâ, rubro-purpureâ; anfractibus supernè fusco fasciatis; aperturâ magnâ, subrotundâ, labio subexpanso, profundè incrassato.*

THE AMETHYSTINE CYLINDRELLA. Shell cylindrical, rather straight, smooth, purplish-red; whorls banded above with brown; aperture large, rather rounded, lip somewhat expanded, deeply thickened.

CHITTY. Pfeiffer's Monograph I.

Hab. Jamaica.

A more straight-sided shell than others of the same group.

Species 16. (Mus. Brit.)

CYLINDRELLA ADAMSIANA. *Cyl. testâ breviter cylindricâ, tenui, lævi, corneo variegatâ, ad suturam fusco alboque articulatâ; aperturâ obliquâ, lateraliter subproductâ, labio rotundo.*

THE ADAMSIAN CYLINDRELLA. Shell shortly cylindrical, thin, smooth, variegated with horn-colour, articulated with brown and white at the suture; aperture oblique, a little produced laterally; lip rounded.

PFEIFFER. Monographia Heliceorum, I.

Hab. Hayti.

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Sowerby del et Lith.

Vincent Brooks Day & Son Imp

CYLINDRELLA.

PLATE III.

Species 17. (Mus. Brit.)

CYLINDRELLA VENTRICOSA. *Cyl. testâ brevi, ventricosâ, medio inflatâ, suprà infràque angustatâ, anfractibus purpureo alboque strigatis, ultimo brevi, angusto, post columellam excavato; aperturâ parvâ, rotundâ.*

THE VENTRICOSE CYLINDRELLA. Shell short, ventricose, inflated in the middle, narrowed above and below, whorls striped with purple and white, last short, narrow, hollowed behind the columella; aperture small, round.

GUNDLACH. Pfr. Novit. Conch. p. 250.

Hab. Cuba.

Species 18. (Mus. Brit.)

CYLINDRELLA GRAVESII. *Cyl. testâ brevi, subcylindricâ, infrà fuscâ, suprà albidâ, anfractibus rectiùsculis, ultimis subæqualibus, deinde versùs apicem subito contractis; ultimo rimato, breviter soluto; aperturâ lateraliter subproductâ, rotundâ, margine rotundo.*

GRAVES'S CYLINDRELLA. Shell short, subcylindrical, brown below, whitish above, whorls rather straight, the last nearly equal, thence towards the apex suddenly contracted; last notched, shortly loosened; aperture rather produced laterally, rounded, with rounded edge.

ADAMS. Pfeiffer, Monographia Heliceorum, iii. 570.

Hab. Jamaica.

Species 19. (Mus. Brit.)

CYLINDRELLA SUTURALIS. *Cyl. testâ brevi, pupæformi, vix rimatâ, tenuiùsculâ, obliquè minutissimè striatâ, nitens, corneâ, medio ventricosâ, apice attenuato, acuto, suturâ castaneo marginatâ; anfractibus* 12, *convexiùsculis, ultimo vix soluto, aperturâ obliquâ, subcirculari, margine tenui, breviter expanso.*

THE SUTURED CYLINDRELLA. Shell short, pupa-shaped, scarcely notched, rather thin, obliquely very minutely striated, shining, horn-coloured, ventricose in the middle, apex attenuated, sharp, suture bordered with chestnut; whorls twelve, rather convex, last very slightly loosened; aperture oblique, rather circular, with thin edge, slightly expanded.

WEINLAND. Mal. Bl. ix. 1862, p. 194.

Hab. Haiti.

Species 20. (Mus. Brit.)

CYLINDRELLA SOWERBYANA. *Cyl. testâ subpyramidatâ, griseo-fuscâ, subrimatâ, anfractibus vix convexis, eleganter obliquè liratis, versùs apicem gradatim attenuatis, ultimo infrà subcarinato; aperturâ subrotundâ; columellâ intùs laminatim plicato.*

SOWERBY'S CYLINDRELLA. Shell subpyramidal, brown-grey, slightly notched; whorls scarcely convex, elegantly obliquely ridged, gradually attenuated towards the apex, the last slightly keeled below; aperture rather rounded; columella with a laminar plait within.

PFEIFFER. Monographia Heliceorum, iii. 372.

Hab. Isl. of Cuba.

Species 21. (Mus. Brit.)

CYLINDRELLA CÆRULANS. *Cyl. testâ angustatâ, elongatâ, subcæruleâ, fusco-griseo undulatim strigatâ, versùs apicem attenuatâ, medio vix inflato, anfractibus convexiùsculis, numerosis, ultimo contracto, aperturâ subobliquâ, intùs uniplicatâ, margine tenui.*

THE BLUISH CYLINDRELLA. Shell narrow, elongated, bluish, with undulating greyish-brown stripes, attenuated towards the apex, slightly inflated in the middle; whorls rather convex, numerous, last contracted; aperture rather oblique, single-plaited within, margin thin.

POEY. Pfeiffer, Mon. Hel. iv. 700.

Hab. Cuba.

Species 22. (Mus. Brit.)

CYLINDRELLA DENTICULATA. *Cyl. testâ angustâ, attenuatâ, elongatâ, fusco strigatâ, ad suturam denticulatâ, versùs spiram contractâ, suprà medium et infrà rectiùsculo, cylindraceo; aperturâ subobliquè productâ.*

THE DENTICULATED CYLINDRELLA. Shell narrow, attenuated, elongated, striped with brown, denticulated at the suture, contracted towards the spire, rather straight and cylindrical above the middle and below, aperture rather obliquely produced.

PFEIFFER. Chem. p. 65.

Hab. Mexico.

The suture is denticulated with little white points.

Species 23. (Mus. Brit.)

CYLINDRELLA SHUTTLEWORTHIANA. *Cyl. testâ elongatâ, angustatâ, cylindraceâ, subpellucidâ, pallidè fulvâ; anfractibus subdistanter obliquè liratis, superioribus contractis, medianis et inferioribus subæqualibus, rectiùsculis; ultimo elongato, infrà subcarinato, soluto; aperturâ subtrigonâ, obliquè productâ.*

SHUTTLEWORTH'S CYLINDRELLA. Shell elongated, narrow, cylindrical; rather pellucid, pale fulvous, whorls rather distantly obliquely ridged, the upper ones contracted, middle and lower ones rather equal, rather straight, last elongated, slightly keeled below, loosened; aperture subtrigonal, obliquely produced.

POEY. Chemnitz, p. 18.

Hab. Cuba.

Species 24. (Mus. Brit.)

CYLINDRELLA PUNCTURATA. *Cyl. testâ pupæformi, brevi, suprà subroseâ, infrà albidâ, medio inflato, versùs apicem gradatim contracto; suturâ articulatim punctatâ; anfractibus rectiùsculis, ultimo subcontracto; aperturâ magnâ, subcontractâ, margine rotundo.*

THE PUNCTURED CYLINDRELLA. Shell pupa-shaped, short, rather pink above, whitish below, inflated in the middle, gradually contracted towards the apex, suture marked with articulated spots; whorls rather straight, the last a little contracted; aperture large, somewhat contracted, margin rounded.

PFEIFFER. Proc. Zool. Soc., 1852.

Hab. St. Domingo.

Species 25. (Mus. Brit.)

CYLINDRELLA HUMBOLDTIANA. *Cyl. testâ sinistrorsâ, subcylindricâ, pallidè fulvâ, tenuissimè striatâ; anfractibus rectiùsculis versùs spiram angustatis; ultimo elongato; aperturâ obliquâ, columellâ uniplicatâ.*

HUMBOLDT'S CYLINDRELLA. Shell sinistral, subcylindrical, pale fulvous, very finely striated; whorls rather straight, narrowed towards the spire, last elongated; aperture oblique, with one plait on the columella.

PFEIFFER. Chem. p. 14, t. 2, f. 20, 24.

Helix columella, Ferr.

Hab. Cuba.

Species 26. (Mus. Brit.)

CYLINDRELLA MACROSTOMA. *Cyl. testâ brevi, profundè rimatâ, solidâ, confertè striatâ, spirâ sursum attenuatâ, medio et infrà subventricosâ; anfractibus vix convexis, ultimo infrà subattenuato, basi corinato; aperturâ ovatâ, labio albo, incrassato, expanso.*

THE LARGE-MOUTHED CYLINDRELLA. Shell short, deeply notched, solid, closely striated, spire attenuated above, rather ventricose above and below; whorls scarcely convex, the last a little lengthened below, keeled at the base, aperture ovate, lip white, thickened, expanded.

PFEIFFER. Chemn. p. 73.

Hab. Jamaica.

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Sowerby del et Lith.

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CYLINDRELLA.

PLATE IV.

Species 27. (Mus. Brit.)

CYLINDRELLA ALBO-CRENATA. *Cyl. testâ brevi, subventricosâ, solidulâ, obliquè striatâ, corneo et albido variegatâ; spirâ medio subinflatâ, versùs apicem attenuatâ, anfractibus supernè ad suturam nodulis albis crenatis, ultimo angustato, subsoluto, infrà carinato; aperturâ obliquè subrotundâ, columellâ uniplicatâ.*

THE WHITE-CRENATED CYLINDRELLA. Shell small, rather ventricose, rather solid, obliquely striated, variegated with horn-colour and white; spire a little inflated in the middle, attenuated towards the apex; whorls crenated above at the suture with white nodules, last narrow and somewhat uncoiled, keeled at the bottom; aperture obliquely somewhat rounded; columella single-plaited.

GUNDLACH. Pfeiffer, Malak. Bl. xi. 1863, p. 7.

Hab. Isl. Cuba.

Species 28. (Mus. Brit.)

CYLINDRELLA OBLIQUA. *Cyl. testâ angustâ, subcylindricâ, fulvo alboque nebulatâ, fusco-grisescenti hinc-illic strigatâ, obliquè liratâ, ad suturam crenulatâ, anfractibus rectiùsculis angustis, penultimo et suprà quinque subæqualibus, spirâ versùs apicem attenuatâ; aperturâ perobliquè ovatâ, labio externo producto.*

THE OBLIQUE CYLINDRELLA. Shell narrow, subcylindrical, clouded with brown and white, striped here and there with greyish brown, obliquely ridged, crenulated at the suture, whorls rather straight, narrow, the penultimate and five above nearly equal; spire attenuated towards the apex; aperture very obliquely ovate, outer lip produced.

PFEIFFER. Malak. Bl. xi. 1863.

Hab. Isl. of Cuba.

Species 29. (Mus. Brit.)

CYLINDRELLA PERPLICATA. *Cyl. testâ subfusiformi, angustâ, corneâ, anfractibus convexis plicatis apicalibus angustatis, medianis inflatis, ultimo coarctato, longè laxato, plicis anfractuum obliquis, distantibus, prominentibus, medio depressis; aperturâ remotâ, subrotundâ, margine rotundo, columellâ haud plicatâ.*

THE WELL-PLAITED CYLINDRELLA. Shell rather fusiform, narrow, horny; whorls convex, plaited, the apical ones narrow, middle ones inflated, last contracted, much uncoiled, plaits of the whorls oblique, distant, prominent, depressed in the middle; aperture remote, a little rounded, margin round, columella not plaited.

FERRUSSAC. Pfeiffer, Mon. Helic. ii.

Hab. West Indies.

Species 30. (Mus. Brit.)

CYLINDRELLA PALLIDA. *Cyl. testâ parvâ, pallidâ, fusiformi, versùs apicem attenuatâ, medio inflato; anfractibus vix convexis, ultimo infrà angustato, longè laxato, plicis anfractuum arcuatis, acutis subdistantibus; aperturâ remotâ, rotundâ; columellâ haud plicatâ.*

THE PALE CYLINDRELLA. Shell small, pale, fusiform, attenuated towards the apex, inflated in the middle; whorls scarcely convex, the last narrow beneath, a long portion unrolled; plaits of the whorls curved, sharp, rather distant; aperture remote, rounded, columella not plaited.

GUILDING. Bland in Adams's Contributions to Conchology.

Brachypus costatus, Gray.

Cylindrella costulosa, Adams.

Hab. Porto Rico, Isl. St. Thomas.

Species 31. (Mus. Brit.)

CYLINDRELLA PRUINOSA. *Cyl. testâ pallidè purpureâ, elongatâ, angustatâ, suprà medium paulò inflatâ, anfractibus distanter fusco strigatis, plicis eleganter arcuatis, tenuibus numerosis lyratis, ultimo elongato, paulò obliquè soluto; aperturâ obliquâ, ovatâ, columellâ uniplicatâ.*

THE PLUM-COLOURED CYLINDRELLA. Shell pale purple, elongated, narrow, a little inflated above the middle, whorls distantly striped with brown, ridged with elegantly curved, thin, numerous plaits; the last elongated, a little obliquely loosened; aperture oblique, oval.

MORELET. In Chemnitz, p. 39.

Hab. Isl. of Pines, near Cuba.

Species 32. (Mus. Brit.)

CYLINDRELLA IRRORATA. *Cyl. testâ cylindricâ, angustâ, rectâ, elongatâ, strigis undulatis parvis, interruptis variegatâ, anfractibus rectis, altis, versùs apicem contractis; aperturâ magnâ, auriformi, obliquâ, labio externo anticè producto, supernè depresso; columellâ uniplicatâ.*

THE SPRINKLED CYLINDRELLA. Shell cylindrical, narrow, straight, elongated, varied with undulating, small, interrupted stripes; whorls straight, elevated, contracted towards the apex; aperture large, auriform, oblique, outer lip produced anteriorly, depressed above; columella with one plait.

GUNDLACH. Chem. p. 64.

Hab. Cuba.

Species 33. (Mus. Brit.)

CYLINDRELLA ELONGATA. *Cyl. testâ sinistrâ, albâ, tenuiter striatâ, gracile, fusiformi; anfractibus* 14, *convexis, altis, versùs apicem contractis, infrà medium inflatis, ultimo brevi, infrà validè carinato; aperturâ magnâ, ovatâ, infrà subacuminatâ, labio externo expanso, infrà vix plicato.*

THE ELONGATED CYLINDRELLA. Shell sinistral, white, finely striated, slender, fusiform; whorls fourteen, convex, elevated, contracted towards the apex; inflated towards the middle, the last short, with a strong keel below; aperture large, oval, rather acuminated below, inner lip expanded, with a very slight plait below.

CHEMNITZ. Conch. Cab. p. 58.

Helix Chemnitziana, Férrussac.

Pupa gracilis, Sowerby.

Cylindrella Cumingii, Adams.

Hab. Jamaica.

Species 34. (Mus. Brit.)

CYLINDRELLA FASTIGIATA. *Cyl. testâ breviter rimatâ, subulatâ, solidulâ, subdistanter validè costatâ, griseo-albidâ; inter costas purpureo; spirâ gracile, longè productâ, anfractibus brevibus, numerosus, rotundis, ultimo infrà vallidè compresso, carinato, infrà carinam striato, breviter soluto; aperturâ subtrigonâ, lateraliter breviter productâ, columellâ vix plicatâ.*

THE BOUND CYLINDRELLA. Shell shortly notched, subulate, rather solid, rather distantly strongly ribbed, greyish white, purple between the ribs; spire slender, much produced, whorls short, numerous, rounded; last much compressed beneath, keeled, striated below the keel, shortly uncoiled; aperture subtrigonal, laterally shortly produced; columella very slightly plaited.

GUNDLACH. MS. Pfeiffer in Malak. Bl. viii. 1860, p. 20.

Hab. Baracoa, Cuba.

Species 35. (Mus. Brit.)

CYLINDRELLA GOSSEI. *Cyl. testâ pallidè fulvâ; tenuiter acutè striatâ, subpyramidatâ, versùs apicem gradatim attenuatâ, infrà medium vix inflatâ; anfractibus rectiùsculis, ultimo infrà carinato, subcontracto, infrà carinam subexcavato; aperturâ magnâ, ovatâ, columellâ plicatâ.*

GOSSE'S CYLINDRELLA. Shell pale fulvous; finely acutely striated, subpyramidal, gradually attenuated towards the apex, very little inflated below the middle; whorls rather straight, the last keeled below, slightly contracted, somewhat excavated below the keel; aperture large, ovate, columella plaited.

PFEIFFER. Chem. p. 70.

Hab. Jamaica.

Species 36. (Mus. Brit.)

CYLINDRELLA ELEGANS. *Cyl. testâ subfusiformi, rubro-fulvâ, lævi, medio subinflatâ; anfractibus brevibus, paulò convexis, ultimo obliquè soluto, declivi; aperturâ obliquè ovatâ, margine incrassato, expanso, columellâ intùs leviter plicatâ.*

THE ELEGANT CYLINDRELLA. Shell subfusiform, red-brown, smooth, slightly inflated in the middle, whorls short, a little convex, the last obliquely uncoiled, sloped downwards; aperture obliquely ovate, margin thickened, expanded; columella very slightly plaited within.

PFEIFFER. Chem. p. 23.

Pupa obtorta, Menke.

Pupa lituus, Gould.

Pupa Auberiana, Orbigny.

Cylindrella nobilis, Steutz.

Hab. Western part of Cuba.

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Sowerby del et Lith

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CYLINDRELLA.

PLATE V.

Species 37. (Mus. Brit.)

CYLINDRELLA HANLEYANA. *Cyl. testâ parvâ, tenui, fuscâ, subpyramidatâ, angustatâ, medio vix inflatâ, versùs apicem contractâ; anfractibus angustis, numerosis, rectiùsculis, liris tenuibus, arcuatis sculptis; ultimo convexiùsculo, infrà acutè carinato, versùs aperturam longè soluto; aperturâ remotâ, subquadratâ, declivi.*

HANLEY'S CYLINDRELLA. Shell small, thin, brown, rather pyramidal, narrow, scarcely inflated in the middle, contracted towards the apex; whorls narrow, numerous, rather straight, sculptured with fine curved ridges; the last rather convex, sharply keeled below, much uncoiled; aperture remote, rather square, sloped downwards.

PFEIFFER. Chemnitz, p. 42, Monog. iv. 152.

Hab. Venezuela, New Grenada.

A neatly sculptured little shell.

Species 38. (Mus. Brit.)

CYLINDRELLA CHORDATA. *Cyl. testâ parvâ, albâ, tenui, subfusiformi, angustâ, medio inflato; anfractibus* 14, *liris obliquè subarcuatis distantibus validis sculptis, ultimo longè soluto, infrà validè carinato, versùs aperturam declivi; aperturâ anticè biangulatâ, supernè recto.*

THE CORDED CYLINDRELLA. Shell small, white, thin, rather fusiform, narrow, inflated in the middle; whorls fourteen, sculptured with obliquely rather arched, distant, strong ridges; the last much uncoiled, sloped downwards towards the aperture; aperture anteriorly biangular, straight above.

PFEIFFER. Chem. p. 48, Monog. 1866, No. 202.

Hab. Isl. St. Croix.

An exquisitely beautiful little white species.

Species 39. (Mus. Brit.)

CYLINDRELLA CRISPULA. *Cyl. testâ pupæformi, fuscâ, regulariter liratâ, suprà medium inflatâ, infrà indè ad ultimum anfractum gradatim attenuatâ; ultimo anfractu parvâ, paulò soluto; aperturâ obliquè oblongâ, quadrangulatâ.*

THE LITTLE CRISP CYLINDRELLA. Shell fusiform, brown, regularly ridged, inflated above the middle; thence gradually attenuated towards the last whorl; last whorl small, slightly uncoiled; aperture obliquely oblong, with four angles.

PFEIFFER. Monograph ii. 377.

Hab. Cuba.

Species 40. (Mus. Brit.)

CYLINDRELLA SALLEANA. *Cyl. testâ elongatâ, subpyramidatâ, fusco-corneâ, tenuiter obliquè striatâ; anfractibus angustis* 18, *quarum* 6 *apicalibus albis, coarctatis, medianis convexiùsculis, alteris versùs aperturam vix angustatis; ultimo contracto, subsoluto, infrà carinato; aperturâ productâ, magnâ, labio expanso, infrà biangulato.*

SALLE'S CYLINDRELLA. Shell elongated, subpyramidal, horny-brown; finely obliquely striated; whorls narrow, eighteen, of which the six apical are white and narrowed, rather convex, the middle ones a little convex, the others slightly narrowed towards the aperture; aperture produced, large, with expanded lip, biangular below.

PFEIFFER. Chem. p. 38.

Hab. Haiti.

Species 41. (Mus. Brit.)

CYLINDRELLA TRINITARIA. *Cyl. testâ succineo-corneâ, tenui, gracili, subdiaphanâ, medio subinflatâ, supernè attenuatâ; anfractibus, angustis, convexis, tenuiter liratis; ultimo basi acutè carinato, infrà carinam concavo, anticè longè soluto, obliquè deflexo; aperturâ remotâ obliquè ovatâ, anticè biangulatâ.*

THE TRINITY ISLAND CYLINDRELLA. Shell amber-horn, thin, slender, rather diaphanous, slightly inflated in the middle, attenuated above, whorls narrow, convex, finely ridged; the last sharply keeled at the base, concave below the keel, anteriorly much uncoiled, obliquely bent downwards.

PFEIFFER. In Malak. Bl. vii. 1860.

Hab. Trinity Island.

Species 42. (Mus. Brit.)

CYLINDRELLA MICROSTOMA. *Cyl. testâ subperforatâ, pupæformi, cretaceâ; suprà medium inflatâ, indè versùs ultimum anfractum gradatim attenuatâ; anfractibus angustis, numerosis, ultimo contracto, infrà excavato; aperturâ parvâ, verticali, subtrigonâ.*

THE SMALL-MOUTHED CYLINDRELLA. Shell slightly perforated, pupa-shaped, chalky; inflated above the middle, thence gradually attenuated towards the last whorl; whorls narrow, numerous, the last contracted, excavated below; aperture small, vertical, subtrigonal.

PFEIFFER. Proc. Zool. Soc. 1861, p. 27.

Hab. —— ?

A curious little pupæform shell, which has the greatest inflation above the middle of its length.

Species 43. (Mus. Brit.)

CYLINDRELLA AGNESIANA. *Cyl. testâ elongatâ, cylindricâ, angustâ, albidâ, tenuiter striatâ; anfractibus 18, sinistrorsis, convexiùsculis; ultimo recto, infrà carinato, infrà carinam excavato, versùs aperturam longè soluto, bicarinato, valdè deflexo, aperturâ remotâ, obliquè subquadratâ, margine interno rotundo, labio externo biangulato.*

THE AGNESIAN CYLINDRELLA. Shell elongated, cylindrical, narrow, whitish, finely striated; whorls eighteen, sinistral, rather convex; the last straight, keeled below, excavated below the keel, uncoiled some length towards the aperture, much bent downwards; aperture remote, obliquely subquadrate, inner margin round, outer lip biangular.

ADAMS, C. B. Chem. p. 38.

Hab. Jamaica.

A graceful white shell.

Species 44. (Mus. Brit.)

CYLINDRELLA MONTANA. *Cyl. testâ brevi, rectiùsculâ, roseâ, tenuiter striatâ; ultimo anfractu angustato, rotundato, lateraliter soluto; aperturâ subrotundâ, subremotâ, margine crassiùsculo, rotundo.*

THE MOUNTAIN CYLINDRELLA. Shell short, rather straight, pink, finely striated; last whorl narrow, rounded, laterally uncoiled; aperture rather round, rather distant, margin rather thick, round.

C. B. ADAMS. Chem. p. 29.

Cylindrella rosea, var., Pfeiffer.

Hab. Jamaica.

Species 45. (Mus. Brit.)

CYLINDRELLA TERES. *Cyl. testâ crassiùsculâ, lævigatâ, subpyramidatâ, albâ, supernè fuscâ, attenuatâ; anfractibus convexiùsculis, ultimo paulò angustato, infrà subcarinato, infrà carinam excavato; aperturâ proximâ magnâ, subrotundâ; columellâ supernè subcallosâ.*

THE TAPER CYLINDRELLA. Shell rather thick, smooth, rather pyramidal, white; brown above, attenuated; whorls rather convex, the last a little narrowed, slightly keeled beneath, hollowed beneath the keel; aperture approximate, large, rather rounded; columella with a slight callosity above.

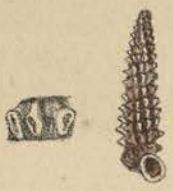
MENKE. (Holospira) Chem. p. 56.

Hab. Cuba.

Species 46. (Mus. Brit.)

CYLINDRELLA SEMINUDA. *Cyl. testâ parvâ, gradato-turritâ, pupæformi; anfractibus scalariformibus supernè angulatis; ad angulum prominentè noduloso-squamatis; ultimo infrà angustato, lateraliter longè soluto; aperturâ remotâ, latere columellari rotundâ, latere externo angulatim acuminato.*

THE HALF-NUDE CYLINDRELLA. Shell small, pupa-shaped; whorls angular above, prominently nodosely squamose at the angle; the last narrowed below, laterally much uncoiled; aperture remote, rounded on the columellar side, angularly acuminated at the inner side.



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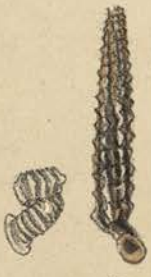

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Sowerby del et Lith.

Vincent Brooks Day & Son Imp

CYLINDRELLA.

PLATE VI.

Species 47. (Fig. *a*, *b*, Mus. Sowerby.)

CYLINDRELLA ELLIOTI. *Cyl. testâ angustissimè cylindraceâ, purpureo-fuscâ, tubulis albis angulatis suprà medium anfractuum prominentibus contìnuis ornatâ; anfractibus numerosis, angustis; ultimo lateraliter obliquè soluto; aperturâ remotâ, parvâ, subrotundâ.*

ELLIOT'S CYLINDRELLA. Shell very narrowly cylindrical, purple-brown, ornamented with white angular tubes, prominent above the middle of the whorls; whorls numerous, narrow; last laterally obliquely uncoiled; aperture remote, small, rather round.

POEY. Mem. Cuba.

Hab. Cuba.

The tubes or hollow varices continued from whorl to whorl up the spire of this shell make it a remarkably interesting species.

Species 48. (Mus. Sowerby.)

CYLINDRELLA PILOCERI. *Cyl. testâ subcæruleo-albâ, tenuiter liratâ, pupæformi, medio et infrà rectâ, suprà medium inflatâ, indè versùs apicem contractâ, anfractibus numerosis, angustis, ultimo parvo, infrà angulato, infrà angulum lævigato, medio rimato; aperturâ proximâ, majusculâ, supernè subquadratâ.*

PILOCERE'S CYLINDRELLA. Shell bluish-white, finely ridged, pupa-shaped, straight at the middle and below; inflated above the middle, thence contracted towards the apex; whorls numerous, narrow; the last small, angular below, smooth below the angle, notched in the middle; aperture near, rather large, rather square above.

PFEIFFER. Chem. p. 64, Mon. ii. 382.

Hab. Mexico.

Species 49. (Mus. Sowerby.)

CYLINDRELLA ARCUATA. *Cyl. testâ brevi, ventricosâ, liris tenuibus, subdistantibus, eleganter arcuatis ornatâ suprà medium inflatâ; anfractibus* 8, *vix convexis; suturâ profundè excavatâ; ultimo anfractu angusto, crenulatim carinato, infrà carinam concavo, medio rimato; aperturâ subquadratâ, margine expanso.*

THE ARCHED CYLINDRELLA. Shell short, ventricose, ornamented with thin, rather distant elegantly curved ridges; inflated above the middle; whorls eight, scarcely convex, with deeply excavated suture; last whorl narrow, crenulated, keeled, concave below the keel, notched in the middle; aperture rather square, with expanded margin.

WEINLAND AND MARTENS. Malak. Bl. vi. 1859.

Hab. Haiti.

Species 50. (Mus. Sowerby.)

CYLINDRELLA SAUVALLIANA. *Cyl. testâ lævigatâ, fusco-corneâ, angustè cylindricâ, propè apicem pyramidatâ; anfractibus altis, infrà lineâ rubrâ angulatâ; aperturâ proximâ, magnâ, margine tenui, expanso.*

SAUVALLI'S CYLINDRELLA. Shell smooth, horny-brown, narrowly cylindrical, pyramidal near the apex; whorls elevated, belted below with a red line; aperture near, large, margin thin, expanded.

GUNDLACH. Chem. p. 64, Pfr. Monog. iv. 710.

Hab. Cuba.

A smooth elevated species with a pretty red line at the bottom of the whorls partly hidden by the suture.

Species 51. (Mus. Sowerby.)

CYLINDRELLA WALPOLEI. *Cyl. testâ magnâ, epidermide olivaceo-fusco indutâ, cylindraceo-subpyramidatâ, tenuiter obliquè striatâ, anfractibus altis paulò convexis; ultimo declivi, versùs axem angustatâ, post aperturam profundè rimato; aperturâ paulò laxatâ, perpendiculariter ovatâ, columellâ uniplicatâ.*

WALPOLE'S CYLINDRELLA. Shell large, covered with an olive-brown epidermis, cylindrically subpyrami-

dal, finely obliquely striated; whorls elevated, a little convex; last sloped, narrowed towards the axis, deeply notched behind the aperture; aperture a little uncoiled, perpendicularly ovate; columella with a plait.

SOWERBY.

Hab. —— ?

Species 52. (Mus. Sowerby.)

CYLINDRELLA BROOKESIANA. *Cyl. fusiformi, tenui, gracili, corneâ, obliquè tenuiter striatâ; anfractibus convexiùsculis, ultimo longissimè soluto, carinato, flexuoso, subspiraliter descendenti; aperturâ longè remotâ, subcirculari, margine expanso.*

THE BROOKESIAN CYLINDRELLA. Shell fusiform, thin, slender, horny, obliquely finely striated; whorls rather convex, the last uncoiled a great length, keeled, flexuous, rather spirally descending; aperture very remote, rather rounded, with expanded margin.

GUNDLACH. MS. Pfeiffer in Malak. Bl. vi. 1859.

Hab. Monte Libano, Isl. of Cuba.

Species 53. (Mus. Sowerby.)

CYLINDRELLA NOBILEOR. *Cyl. testâ cylindricâ, tenuiter striatâ, corneo-subroseâ; anfractibus vix convexis, supernè ad suturam rubro tæniatis; anfractu ultimo brevi, infrà rimato, breviter soluto; aperturâ productâ, fulvâ, ad marginem subexpansâ, columellâ internè latâ, subplicatâ.*

THE NOBLER CYLINDRELLA. Shell cylindrical, finely striated, horny-pinkish; whorls scarcely convex, banded with pink above at the suture; last whorl short, notched below, shortly uncoiled; aperture produced, fulvous, a little expanded at the margin, columella broad within, with a slight plait.

ADAMS. Chem. p. 9.

Cylindrella Binneyana, Pfeiffer.

Hab. Jamaica.

Species 54. (Mus. Sowerby.)

CYLINDRELLA MEGACHEILA. *Cyl. testâ roseo-corneâ, cylindricâ, ventricosâ, tenuissimè striatâ; anfractibus brevibus, supernè ad suturam rubro tæniatis, ultimo profundè rimato; aperturâ annexâ, magnâ, supernè subquadratâ; margine rotundo, expanso.*

THE LARGE-THROATED CYLINDRELLA. Shell horny-rose, cylindrical, ventricose, very finely striated; whorls short, with a red band above at the suture; last whorl deeply notched; aperture annexed, large, rather square above, margin rounded, expanded.

CHITTY. Shells of Jamaica.

Hab. Jamaica.

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Sowerby del et Lith.

Vincent Brooks Day & Son Imp

CYLINDRELLA.

PLATE VII.

Species 55. (Mus. Brit.)

CYLINDRELLA STRIATELLA. *Cyl. testâ rimatâ, pyramidato-cylindraceâ, solidulâ, tenuissimè obliquè striatâ, lævi, corneâ, medio rubescenti, usque ad medium subcylindricâ, deinde ad apicem lentè attenuatâ, anfractibus breviùsculis; rectiùsculis; aperturâ subrotundâ, intùs subroseâ; columellâ vix plicatâ.*

THE FINELY STRIATED CYLINDRELLA. Shell notched, pyramidal, cylindrical, rather solid, very finely obliquely striated, smooth, horny, a little red in the middle; cylindrical up to the middle, afterwards slowly attenuated; whorls rather short, rather straight; aperture rather rounded, a little rosy within; columella scarcely plaited.

WRIGHT. MS. Pfeiffer, Malak. Bl. xi. p. 246.

Hab. The western part of the Isl. of Cuba.

Species 56. (Mus. Sowerby.)

CYLINDRELLA LAVALLIANA. *Cyl. testâ fulvo-corneâ, tenui, semipellucidâ, angustâ, elongatâ, cylindricâ, rimatâ; anfractibus brevibus, numerosis, convexiùsculis; ultimo rotundo, contracto, soluto; aperturâ subremotâ, columellâ rectiùsculâ.*

LAVALLI'S CYLINDRELLA. Shell fulvous horn, thin, semi-pellucid, narrow, elongated, cylindrical, notched; whorls short, numerous, rather convex; the last rounded, contracted, uncoiled; aperture rather distant, columella rather straight.

ORBIGNY. Shells of the Isl. of Cuba.

Hab. Cuba.

The whorls of this cylindrical little species are peculiarly short.

Species 57. (Mus. Sowerby.)

CYLINDRELLA POLYGYRA. *Cyl. testâ parvâ, fuscâ, elongatâ, angustissimâ, versùs apicem fuscâ, gradatim attenuatâ, medio paulò inflato, anfractibus 20, brevibus, liris arcuatis ornatis, ultimo rimato, longè soluto; aperturâ subtrigonâ remotâ, margine supernè recto.*

THE MANY-WHORLED CYLINDRELLA. Shell small, elongated, very narrow, gradually attenuated towards the apex, a little inflated in the middle; whorls twenty, short, ornamented with curved ridges; last notched, with a long portion uncoiled; aperture rather trigonal, remote, margin straight above.

PFEIFFER. Monog. iv. p. 206.

Hab. Cordova, Mexico.

Species 58. (Mus. Sowerby.)

CYLINDRELLA LATA. *Cyl. testâ rimatâ, cylindricâ, ventricosâ, corneo-rubescenti, tenuiter obliquè liratâ; anfractibus breviùsculis, tæniâ rubrâ supernè ad suturam cinctis, ultimo soluto, infrà carinato; aperturâ disjunctâ, productâ, fulvâ, columellâ uniplicatâ, margine rotundè reflexo, expanso.*

THE BROAD CYLINDRELLA. Shell notched, cylindrical, ventricose, reddish-horn, finely obliquely ridged; whorls rather short, belted above at the suture with a red band, last uncoiled, keeled below; aperture disconnected, produced, fulvous, columella single-plaited, margin roundly reflected, expanded.

A. B. ADAMS. Chemn. 22. Pfr. Monog. iii. 567.

Hab. Jamaica.

Resembling *Cylindrella Binneyana* and others in general appearance, but with the mouth detached and produced.

Species 59. (Mus. Brit.)

CYLINDRELLA MORELETI. *Cyl. testâ elongato-cylindricâ, angustâ, vix rimatâ, corneo-rubescenti, pallidè variegatâ, tenuiter undatim rugatâ, anfractibus subelevatis, convexiùsculis, infrà lineâ rubrâ tæniatis, ad suturam crenatis; aperturâ obliquâ; columellâ uniplicatâ.*

MORELET'S CYLINDRELLA. Shell elongate-cylindrical, narrow, scarcely notched, reddish-horn, pale-variegated, finely wavily wrinkled, whorls rather raised, rather narrow, banded at the lower part

with a red line, crenated at the suture; aperture oblique, columella single-plaited.

PFEIFFER. Chemn. p. 16. Monograph iii. 566.

Hab. ——?

Species 60. (Mus. Brit.)

CYLINDRELLA VIOLACEA. *Cyl. testâ solidiùsculâ, subcylindricâ, angustâ, purpureo-variegatâ, filo-liratâ, infrà rimatâ, anfractibus connexis, distinctis; ultimo obliquè soluto; aperturâ semicircularî, margine interno rectiùsculo; columellâ leviter uniplicatâ.*

THE VIOLET CYLINDRELLA. Shell rather solid, rather cylindrical, narrow, variegated with purple, with thread-like ridges; notched below, whorls convex, distinct; the last obliquely uncoiled; aperture semicircular; inner margin nearly straight; columella with a slight plait.

WRIGHT. MS. Pfeiffer, Malak. Bl. xi. 1864, p. 128.

Hab. West Cuba.

Species 61. (Mus. Brit.)

CYLINDRELLA MEXICANA. *Cyl. testâ magnâ, cylindrico-subpyramidatâ, stramineâ, ventricosâ, tenuiter striatâ; anfractibus rectiùsculis, paulò convexis, ultimo infrà subcarinato, infrà carinam lævigato; aperturâ subauriformi, infrà cuneatâ, columellâ tortuâ, plicatâ.*

THE MEXICAN CYLINDRELLA. Shell large, cylindrical, subpyramidal, straw-coloured, ventricose, finely ridged; whorls rather straight, a little convex, the last keeled below, smooth below the keel; aperture somewhat auriform, cuneate below, columella tortuous, plicated.

CUMING. MS. Pfeiffer. Proc. Zool. Soc. 1860.

Hab. Mexico.

Species 62. (Mus. Brit.)

CYLINDRELLA ACUS. *Cyl. testâ corneâ, semipellucidâ, angustè cylindricâ, versùs apicem pyramidatâ, lævigatâ; anfractibus superioribus lævissimis inferioribus filo-liratis; ultimo infrà validè carinato, infrà carinam rimato, excavato; aperturâ subquadratâ infrà labium externum cuneato, columellâ leviter uniplicatâ.*

THE SPEAR CYLINDRELLA. Shell horny, semipellucid, narrowly cylindrical, pyramidal towards the apex, smooth, upper whorls very smooth, lower with thread-like ridges; last strongly keeled below, notched below the keel, excavated; aperture rather square, outer lip cuneate below, columella with a slight plait.

PFEIFFER. Monograph ii. No. 383.

Hab. Cuba.

Species 63. (Mus. Brit.)

CYLINDRELLA AUGUSTÆ. *Cyl. testâ cylindricâ, angustâ, subroseâ, tenuissimè striatâ, anfractibus rectiùsculis, infrà angustè tæniatis; aperturâ connexâ, margine albido, rotundo.*

AUGUSTA'S CYLINDRELLA. Shell cylindrical, narrow, rather rose-coloured, very finely striated, whorls rather narrow, with a narrow band below; aperture connected, margin white, rounded.

C. B. ADAMS. Pffr. Monog. iii.

Hab. Jamaica.

Species 64. (Mus. Brit.)

CYLINDRELLA INTUSMALLEATA. *Cyl. testâ subfusiformi, albâ, angustâ, elongatâ, medio paulò ventricosâ; anfractibus brevibus, distanter validè costatis, costis subdistantibus, medio anfractuum malleatis; ultimo anfractu infrà carinato, subrimato, obliquè soluto; aperturâ remotâ, obliquè ovatâ, margine rotundo.*

THE HAMMERED CYLINDRELLA. Shell somewhat fusiform, white, elongated, a little ventricose in the middle; whorls short, distantly strongly ribbed; ribs rather distant, flattened in the middle of the whorls; last whorl keeled below, with a slight notch; aperture removed, obliquely ovate with rounded margin.

GUNDLACHER—— *Pfeiffer*, Monog. iv. 705.

Hab. Cuba.

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Sowerby del et Lith.

Vincent Brooks Day & Son Imp.

CYLINDRELLA.

PLATE VIII.

Species 65. (Mus. Sowerby.)

CYLINDRELLA TUMIDIORA. *Cyl. testâ tenui, fulvâ, fusco-corneo variegatâ, subpyramidatâ; anfractibus brevibus, convexiùsculis ad suturam leviter crenatis, infrà angustissimè rubro tæniatis, ultimo rimato; aperturâ annexâ, anticè productâ, expansâ, suprà medium subcontractâ.*

THE MORE TUMID CYLINDRELLA. Shell thin, fulvous, variegated with horny brown, rather pyramidal; whorls short, rather convex, slightly crenated at the suture, with a very narrow red band below, the last notched; aperture connected, anteriorly produced, expanded, a little contracted above the middle.

SOWERBY.

Hab. Cuba.

The whorls are much shorter and more convex than in *Cylindrella irrorata*.

Species 66. (Fig. *a*, *b*, Mus. Brit.)

CYLINDRELLA GARCIANA. *Cyl. testâ brevi, cylindricâ, minutè liratâ, fulvâ vel albâ; anfractibus rectiùsculis, medianis vix inflatis, ultimo infrà validè carinato, infrà carinam excavato, vix rimato, brevissimè soluto; aperturâ magnâ, ovatâ, subdisjunctâ, columellâ simplici.*

GARCIA'S CYLINDRELLA. Shell short, cylindrical, minutely ridged, fawn-coloured or white; whorls rather straight, the middle ones very little inflated in the middle, the last strongly keeled, hollowed below the keel, scarcely notched, very shortly uncoiled; aperture large, oval, a little disjoined, columella simple.

WRIGHT. MS. Pfr. Mal. Bl. xiii.

Hab. Isl. of Cuba.

Species 67. (Mus. Brit.)

CYLINDRELLA CARINATA. *Cyl. testâ angustâ, elongatâ, subcylindricâ, corneo-rubescenti, lævigatâ; anfractibus elevatis, rectiùsculis, tenuiter striatis, ultimo breviter soluto, infrà subcontracto, validè carinato, infrà carinam excavato, rimato; aperturâ obliquè ovatâ, productâ.*

THE KEELED CYLINDRELLA. Shell narrow, elongated, subcylindrical, reddish-horn, smooth; whorls elevated, rather straight, finely striated, the last shortly uncoiled, a little contracted below, with a strong keel, excavated, notched; aperture obliquely ovate, produced.

PFEIFFER. Monographia Heliceorum, iii. p. 574.

Hab. ——?

The last whorl is rather rounded, then contracted and terminated by a very strong keel, between which and the inner edge of the aperture there is a narrow excavation.

Species 68. (Mus. Brit.)

CYLINDRELLA CYLINDRUS. *Cyl. testâ angustatâ, elongatâ, rubrâ, suprà medium lentissimè attenuatâ; anfractibus elevatis, lævibus, ad laterâ rectissimis, ultimo convexiùsculo, infrà carinam excavato; aperturâ perpendiculariter ovatâ.*

THE CYLINDER CYLINDRELLA. Shell narrow, elongated, red, very slowly attenuated; whorls raised, smooth, very straight, the last rather convex, keeled below, excavated under the keel, aperture perpendicularly ovate.

CHEMNITZ. New Ed. p. 6. Pfeiffer Monog. ii. p. 6.

Pupa cylindra, purpurea, Gray.

Pupa rubella, rosea, C. B. Adams.

Cylindrella procera, C. B. Adams.

Hab. Jamaica.

A narrow shell with straighter whorls than *Cylindrella carinata*, with the keel on the last whorl less prominent.

Species 69. (Mus. Brit.)

CYLINDRELLA DUNKERIANA. *Cyl. testâ angustissimâ, elongatâ, corneo-rubescenti, lævigatâ, medio vix inflatâ; anfractibus elevatis, ad latera rectiùsculis, ultimo elevatissimo, ad latera concavo, subcontracto, infrà angulato; aperturâ connexâ, obliquè ovatâ, anticè subproductâ, subacuminatâ.*

DUNKER'S CYLINDRELLA. Shell very narrow, elongated, reddish-horn, smooth, very little inflated in the middle; whorls elevated, rather straight at the sides, the last very elevated, concave at the sides, a little contracted, angular below; aperture connected, obliquely ovate, anteriorly a little produced and acuminated.

DUNKER. Chemn. p. 67.

Hab. Jamaica.

Species 70. (Mus. Brit.)

CYLINDRELLA FABREANA. *Cyl. testâ albâ, diaphanâ, subpupæformi, medio subinflato, anfractibus convexiùsculis, liris tenuibus obliquè arcuatis, distantibus, ornatis, ultimo elevato, subcontracto, subrotundo, rimato, breviter soluto, tenuiter unicarinato; aperturâ subremotâ, obliquè producto, margine undique expanso, columellâ obliquè uniplicatâ.*

FABREA'S CYLINDRELLA. Shell white, transparent, rather pupæform, a little inflated in the middle; whorls convex, ornamented with thin, obliquely curved, distant ridges; last elevated, a little contracted, a little rounded, notched, shortly uncoiled, with a thin keel; aperture a little removed, obliquely produced, margin expanded all round, columella with an oblique fold.

POEY. MS. Pfeiffer, Malak. Bl. vi. 1859.

Hab. "Leborucal de San Antonio." Cuba.

Species 71. (Mus. Brit.)

CYLINDRELLA INTERRUPTA. *Cyl. testâ fuscâ, cylindricâ, subpupæformi, suprà medium subinflatâ, infrà paulò contractâ, anfractibus brevibus, convexiùsculis, costis distantibus prominentibus, medio anfractuum interruptis sculptis; ultimo anfractu parvo, rimato, obliquè longè soluto; suturâ profundâ; aperturâ obliquè ovatâ, parvâ, margine subexpanso.*

THE INTERRUPTED CYLINDRELLA. Shell brown, cylindrical, slightly pupa-shaped, a little inflated above the middle; a little contracted below; whorls short, rather convex sculptured with distant prominent ribs interrupted in the middle of the whorls, last whorl small, notched, with a large part obliquely uncoiled; suture deep, aperture obliquely ovate, small, with expanded margin.

GUNDLACH. Chemn. p. 29, Pfeiffer. Mon. iv. 705.

Hab. Cuba.

The rib is nearly, if not quite obliterated in the middle of each whorl.

Species 72. (Mus. Brit.)

CYLINDRELLA GONIOSTOMA. *Cyl. testâ, pupæformi, elongatâ, corneâ, tenuiter, distanter et obliquè filostriatâ; suprà medium paulò inflatâ; apice obtuso, infrà subattenuatâ; anfractibus convexiùsculis, brevibus, ultimo rimato, soluto; aperturâ subtrigonâ, supernè biangulatâ; margine angusto, rotundo.*

THE ANGLE-MOUTHED CYLINDRELLA. Shell pupa-shaped, long, horny, with fine, distant, oblique thread-like striæ, a little inflated above the middle; apex obtuse, a little attenuated beneath; whorls a little convex, short, the last notched, uncoiled; aperture rather trigonal, with two angles above; margin narrow, rounded.

PFEIFFER. Chemn. p. 63. Monog. iv. p. 740.

Species 73. (Mus. Brit.)

CYLINDRELLA OBESA. *Cyl. testâ brevi, ventricosâ, solidiùsculâ, rubro-succineâ, tenuiter striatâ, anfractibus 5, convexiùsculis; aperturâ magnâ, rotundâ, connexâ margine crasso, rotundo.*

THE STOUT CYLINDRELLA. Shell short, ventricose, rather solid, reddish-amber, finely striated, whorls five, rather convex; aperture large, rounded, connected with thick, rounded margin.

WEINLAND AND MARTENS. Malak. Bl. vi. 1859, p. 55.

Hab. Haiti.

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G.B. Sowerby del et lith.

Vincent Brooks, Day & Son Imp.

CYLINDRELLA.

PLATE IX.

Species 74. (Mus. Sowerby.)

CYLINDRELLA SCALARINA. *Cyl. testâ pallidè fulvâ, pupæformi; anfractibus* 12, *costis obliquis, crassis, approximatis munitis, superioribus parvis, medianis latis, inflatis, inferioribus angustis; ultimo longè laxato; aperturâ subtransversâ, margine crasso, rotundo.*

THE SCALARIFORM CYLINDRELLA. Shell pale fulvous, pupa-shaped; whorls 12, provided with oblique, thick, approximate ribs, superior small, middle broad, inflated, lower narrow; last much uncoiled; aperture subtransverse, margin thick, rounded.

SHUTTLEWORTH. Pfr. Mon. VI., No. 209.

Hab. Cuba.

Species 75. (Mus. Sowerby.)

CYLINDRELLA SOLUTA. *Cyl. testâ fusiformi, solidiùsculâ, minutè striatâ, pallidè corneâ; anfractibus* 11, *convexiùsculis; ultimo infrà angustato, longè laxato, aperturâ obliquâ, circulari, margine subexpanso.*

THE UNCOILED CYLINDRELLA. Shell fusiform, rather solid, finely striated, pale horn; whorls 11, rather convex; last narrowed below, uncoiled some length, aperture oblique, circular, margin slightly expanded.

PFEIFFER. Malak. Vol. XI., 1863.

Hab. West Cuba.

Species 76. (Mus. Brit.)

CYLINDRELLA HOLLANDI. *Cyl. testâ rectiùsculâ, subcylindricâ, pallidè fulvâ, medio anfractuum fusco fasciatâ; anfractibus permanentibus decem, altiùsculis, rectilateralibus; aperturâ approximatâ, perpendiculariter oblongâ.*

HOLLAND'S CYLINDRELLA. Shell rather straight, rather cylindrical, pale fulvous, banded with brown in the middle of the whorls; permanent whorls ten, rather high, straight-sided; aperture approximate, perpendicularly oblique.

ADAMS, C. B. Pfr. Mon. VI., p. 369.

Hab. Jamaica.

Species 77. (Mus. Sowerby.)

CYLINDRELLA TRANSAPERTA. *Cyl. testâ latâ, subcylindricâ, subfuscâ, tenuissimè striatâ; anfractibus permanentibus* 9-10, *rectilateralibus, superioribus angustatis; ultimo subquadrato, longè rimato; aperturâ transversè oblongatâ; labio interno contingenti, crasso, albo.*

THE CROSS-MOUTHED CYLINDRELLA. Shell broad, subcylindrical, brownish, very finely striated; permanent whorls 9 or 10, straight-sided, upper narrow; last rather square, with a long notch; aperture transversely oblong; inner lip touching, thick, white.

SOWERBY.

Hab. —— ?

The inner margin of the mouth touches the middle of the last whorl, across which it is extended.

Species 78. (Mus. Sowerby.)

CYLINDRELLA GRACILIS. *Cyl. testâ sinistrali, albâ, altissimâ, elongatâ, subfusiformi, tenuissimè striatâ; anfractibus* 18, *obliquis, convexis, gradatim crescentibus; ultimo subcarinato; aperturâ magnâ, ovatâ, columellâ plicatâ.*

THE SLENDER CYLINDRELLA. Shell sinistral, white, very high, elongated, subfusiform, very finely striated; whorls 18, oblique, convex, gradually increasing; last slightly keeled; aperture large, ovate, columella plaited.

WOOD. Pfr. Monog. VI., p. 383.

Hab. Jamaica.

Mentioned at No. 33 as a var. of Cy. oblonga; but it is much more elongated.

Species 79. (Mus. Sowerby.)

CYLINDRELLA MULTISPIRALIS. *Cyl. testâ elongatissimâ, angustâ, fulvâ; anfractibus* 24, *rectiùsculis; ultimo longè laxato; aperturâ distanti, subovatâ.*

THE MULTISPIRAL CYLINDRELLA. Shell very long,

narrow, fawn; whorls 24, rather straight; last loosened some length; aperture distant, subovate.

SOWERBY?

Hab. ——?

The writer has the name with the shell in MS., but does not find it in Pfeiffer's Monograph.

Species 80. (Mus. Sowerby.)

CYLINDRELLA TROCHÆFORMIS. *Cyl. testâ brevi, latâ, densè striatâ, roseâ, spirâ subconicâ; anfractibus permanentibus 7, tribus inferioribus latissimis; ultimo longè rimato; aperturâ magnâ, obliquâ, labio interno producto.*

THE TROCHÆFORM CYLINDRELLA. Shell short, broad, closely striated, pink, spire subconical; permanent whorls 7, three lower very broad; last with a long notch; aperture large, oblique, inner lip produced.

SOWERBY.

Hab. ——?

Species 81. (Mus. Sowerby.)

CYLINDRELLA ALABASTRINA. *Cyl. testâ albâ, cylindricâ, semipellucidâ, gradatim attenuatâ; anfractibus permanentibus 12, rectilateralibus; ultimo infrà angulato, longè laxato; aperturâ magnâ, subrotundâ, distanti, margine rotundo.*

THE ALABASTER CYLINDRELLA. Shell white, cylindrical, semipellucid, gradually attenuated; permanent whorls 12, straight-sided; last angular below, with a long notch; aperture large, rather rounded, distant, margin rounded.

PFEIFFER. Monog. VI., p. 375.

Hab. Jamaica.

Species 82. (Mus. Sowerby.)

CYLINDRELLA CLARA. *Cyl. testâ fulvâ, lævigatâ, subfusiformi, versus apicem attenuatâ; anfractibus medio et infrà subæqualibus, convexiùsculis; ultimo costulato breviter laxato, longè rimato; aperturâ obliquâ, majùsculâ; margine rotundo, columellâ lamellatâ.*

THE CLEAR CYLINDRELLA. Shell fulvous, smooth, subfusiform, attenuated towards the apex; whorls nearly equal at the middle and under, rather convex; last ribbed, shortly uncoiled, with a long notch; aperture oblique, rather large; margin rounded, columella lamellated.

WRIGHT. Pfeiffer Mon. VI., p. 363.

Hab. Cuba.

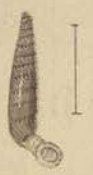
Species 83. (Mus. Sowerby.)

CYLINDRELLA VIGNALENSIS. *Cyl. testâ breviùscùlâ, subventricosâ, carneo-cæruleâ, sursùm subattenuatâ, obliquè costellatâ; anfractibus permanentibus septem, altis; ultimo infrà contracto; aperturâ magnâ, subquadratâ; margine tenui.*

VIGNAL'S CYLINDRELLA. Shell rather short, rather ventricose, ashy-flesh, slightly attenuated upwards, obliquely ribbed; permanent whorls seven, raised; last contracted below; aperture large, rather square; margin thin.

WRIGHT. Pfeiffer Monog. VI., p. 367.

Hab. Cuba.



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G.B.Sowerby del et lith.

Vincent Brooks Day & Son Imp.

CYLINDRELLA.

PLATE X.

Species 84. (Mus. Sowerby.)

CYLINDRELLA TENERIENSIS. *Cyl. testâ subvariegatâ, seu albâ, solidiùsculâ, confertim arcuato-costulatâ, spirâ supra medium et infrà inflatâ; anfractibus permanentibus* 11, *angustatis, ad suturam crenulatis; ultimo angustato, obliquè rimato, longè soluto; aperturâ distanti, obliquè suboblongâ.*

THE TENERIAN CYLINDRELLA. Shell rather variegated, or white, rather solid, closely curve-ribbed, spire inflated above the middle and below; permanent whorls 11, narrow, crenulated at the suture; last narrow, obliquely notched, with long part uncoiled; aperture distant, obliquely rather oblong.

WRIGHT. Pfr. in Malak. Bl. Monog. VI., p. 387.

Hab. La Teneria, West Cuba.

Species 85. (Mus. Sowerby.)

CYLINDRELLA WRIGHTII. *Cyl. testâ altâ, attenuatâ, subfusiformi, obliquè leviter striatâ; anfractibus* 20, *superioribus angustissimis, medianis convexiùsculis; ultimo elongato, infrà angustato, longè soluto; aperturâ distanti, rotundâ, magnâ; margine crassiùsculo.*

WRIGHT'S CYLINDRELLA. Shell high, attenuated, subfusiform, obliquely slightly striated; whorls 20, upper very narrow, middle rather convex; last elongated, narrow below, with a lengthened uncoiled portion; aperture distant, rounded, large; margin rather thick.

PFEIFFER. Malak. Bl. 1862, p. 132.

Hab. Cayo del Ray, Cuba.

Species 86. (Mus. Sowerby.)

CYLINDRELLA LATERADII. *Cyl. testâ elongatâ, sordidè fuscâ; anfractibus permanentibus* 14, *angustis, tenuiter striatis; ultimo subexpanso; infrà angulato; aperturâ subtrigonâ; margine tenui.*

LATERAD'S CYLINDRELLA. Shell elongated, dull brown; permanent whorls 14, narrow, finely striated; last rather expanded, angular below; aperture subtrigonal; margin thin.

GRATELOUP (Clausilia). Pfr. Mon. III., p. 574.

Hab. Haiti.

Species 87. (Mus. Sowerby.)

CYLINDRELLA ILLAMELLATA. *Cyl. testâ subfusiformi, diaphanâ, pallidè corneâ, obliquè striatâ; anfractibus permanentibus* 10, *medianis et inferioribus inflatis; ultimo paulò contracto; aperturâ obliquè ovatâ; margine crassiùsculo; columellâ intùs simplici.*

THE UNLAMELLATED CYLINDRELLA. Shell subfusiform, diaphanous, pale horn, obliquely striated; permanent whorls 10, middle and lower inflated; last a little contracted; aperture obliquely ovate, margin rather thick; columella simple within.

WRIGHT. Pfeiffer Mon. Vol. VI., p. 373.

Hab. La Palma, West Cuba.

Species 88. (Mus. Sowerby.)

CYLINDRELLA PERLATA. *Cyl. testâ brevi, cylindraceâ, albidâ, tenui, semipellucidâ; anfractibus permanentibus novenis ad decenis rectilateralibus, suturâ crenulatâ; ultimo anfractu subcontracto, rimato; aperturâ majùsculâ, obliquè subovatâ.*

THE BROAD CYLINDRELLA. Shell short, cylindrical, whitish, thin, semipellucid; permanent whorls nine or ten, straight-sided, suture crenulated; last whorl subcontracted, notched; aperture rather large, obliquely semiovate.

GUNDLACH. Pfeiffer Malak. Bl. VI., 1859.

Hab. Yateras, Cuba.

Species 89. (Mus. Sowerby.)

CYLINDRELLA PRODUCTA. *Cyl. testâ subfusiformi, fusco-corneâ, lævigatâ; anfractibus permanentibus* 13, *medio et infrà subæqualibus, convexiùsculis, superioribus angustis; ultimo lævitèr soluto; aperturâ majùsculâ, subdistanti.*

THE PRODUCED CYLINDRELLA. Shell rather fusiform, brownish horn, smooth; permanent whorls 13,

middle and lower nearly equal, rather convex, upper narrow; last slightly unwound; aperture rather large, distant.

GUNDLACH. Pfeiffer Mon. Vol. VI., p. 361.

Hab. Cuba.

Species 90. (Mus. Sowerby.)

CYLINDRELLA NOBILIOR. Adams. Species 53. var. *C. Binneyana*, Adams.

Species 91. (Mus. Sowerby.)

CYLINDRELLA INTERMEDIA. *Cyl. testâ cylindricâ, altâ, angustâ, fuscâ, versus apicem contractâ; anfractibus permanentibus undecim, striatis, rectiùsculis; aperturâ paulò disjunctâ, magnâ, obliquè ovatâ; margine crasso.*

THE INTERMEDIATE CYLINDRELLA. Shell cylindrical, high, narrow, brown, contracted towards the apex; permanent whorls eleven, striated, rather straight; aperture a little disjoined, large, obliquely ovate; margin thick.

SOWERBY?

Hab. ——?

The writer is obliged to adopt the name, not having the authority.

Species 92. (Mus. Sowerby.)

CYLINDRELLA BRUNNESCENS. *Cyl. testâ subfusiformi, fuscâ, tenuiter striatâ, solidiùsculâ; anfractibus permanentibus* 14, *angustis, convexiùsculis; ultimo rimato, ad aperturam lævitèr soluto.*

THE BROWNISH CYLINDRELLA. Shell subfusiform, brown, finely striated, rather solid; permanent whorls 14, narrow, rather convex; last notched, slightly unwound at the aperture.

GUNDLACH. Pffr. Mon. Vol. VI., p. 376.

Hab. Cuba.

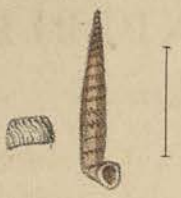
Species 93. (Mus. Sowerby.)

CYLINDRELLA INTEGRA. *Cyl. testâ lævigatâ, altâ, attenuatâ, fulvo-corneâ; anfractibus sexdecim, convexis, obliquis, ultimo soluto; aperturâ majùsculâ, distanti; margine crasso.*

THE ENTIRE CYLINDRELLA. Shell smooth, raised, attenuated, fulvous-horny; whorls sixteen, convex, oblique; last unwound; aperture rather large, distant; margin thick.

PFEIFFER. Mon. Vol. VI., p. 379.

Hab. Cuba.



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G.B. Sowerby del et lith

Vincent Brooks, Day & Son Imp.

CYLINDRELLA.

PLATE XI.

Species 94. (Mus. Sowerby.)

CYLINDRELLA RÜSEI. *Cyl. testâ aculeatâ, corneâ, sursùm attenuatâ, medio et infrà rectigonâ; anfractibus superioribus septenis, angustis, inferioribus septenis subæqualibus, obliquè costatis; costis ad suturam tuberculatis; anfractu apicali papilloso, ultimo infrà angulato, soluto; aperturâ supernè subquadratâ, infrà obliquè subacuminatâ.*

RÜSE'S CYLINDRELLA. Shell aculeated, horny, attenuated above, straight-sided at the middle and under; upper whorls seven, narrow, lower seven nearly equal, obliquely ribbed; ribs tuberculated at the suture; apical whorl papillary, last angular below, unwound; aperture squared above, obliquely acuminated below.

PFEIFFER. Mon. III. p. 378.

Hab. Porto Rico.

Species 95. (Mus. Sowerby.)

CYLINDRELLA COLLARIS. *Cyl. testâ fuscâ, subfusiformi, obliquè densè costatâ; anfractibus permanentibus* 15, *convexis, medianis latiùsculis, ultimo longè soluto; aperturâ rotundâ, margine crasso, rotundo.*

THE NECKED CYLINDRELLA. Shell brown, subfusiform, obliquely closely ribbed; permanent whorls 15, convex, middle rather broad, last with a long uncoiled piece; aperture round, margin thick, round.

FERRUSSAC. Pffr. Mon. II. 375.

Cylindrella antiperversa. Pfeiffer.

Pupa truncatula. Sowerby.

Hab. Guadeloupe.

Species 96. (Mus. Sowerby.)

CYLINDRELLA HILLERI. *Cyl. testâ corneâ, fasciis fuscis semilunaribus variegatâ, tenuiter striatâ, fusiformi, gracili; anfractibus permanentibus quindecim, superioribus angustissimis, rectiùsculis, medianis subinflatis; ultimo parvo, longissimè soluto; aperturâ rotundâ, distanti, margine subexpanso.*

HILLER'S CYLINDRELLA. Shell horny, variegated with brown semilunar bands, finely striated, fusiform, slender; permanent whorls fifteen, upper very narrow, rather straight, middle rather inflated, last small, with very long portion unwound; aperture round, distant, margin a little expanded.

PFEIFFER. Malak. Bl. IX. 1862, p. 132.

Hab. Cuba.

Species 97. (Mus. Sowerby.)

CYLINDRELLA ANGUSTIOR. *Cyl. testâ subcylindricâ, breviùsculâ, corneâ, anfractibus* 19, *rectilateralibus, superioribus contractis, medianis inferioribusque altis, subæqualibus, ultimo infrà rimato, angulato; aperturâ magnâ, margine rotundo.*

THE NARROWER CYLINDRELLA. Shell subcylindrical, rather short, horny; whorls 19, straight-sided, upper contracted, middle and lower high, nearly equal, last notched below, angular; aperture large, margin rounded,

WRIGHT. Pfeiffer. Mon. Vol. VI. p. 384.

Hab. Cayo de San Felipe, Cuba.

Species 98. (Mus. Sowerby.)

CYLINDRELLA ASPERA. *Cyl. testâ fulvâ, fusiformi, supernè contractâ, medio inflatâ, infrà subangustatâ; anfractibus quindecim, obliquè densè striatis, ultimo paulò soluto; aperturâ obliquè oblongâ, subdistanti, margine rotundo.*

THE ROUGH CYLINDRELLA. Shell fulvous, fusiform, contracted above, inflated in the middle, a little narrowed below; whorls 15, obliquely densely striated, last a little unwound; aperture obliquely oblong, rather distant, margin rounded.

ADAMS. Shells of Jamaica. Pfeiffer. Mon. Vol. VI. p. 359.

Hab. Jamaica.

Species 99. (Mus. Sowerby.)

CYLINDRELLA INORNATA. *Cyl. testâ brevi cylindricâ, perobliquè striatâ; anfractibus novenis, rectilateralibus, tribus superioribus subangustatis, alteris subæqualibus, ultimo rimato; aperturâ approximatâ, magnâ, rotundâ, margine rotundo.*

THE PLAIN CYLINDRELLA. Shell short, cylindrical, very obliquely striated; whorls nine, straight-sided, three upper rather narrow, others nearly

equal, last notched; aperture approximate, large, rounded, margin round.

ADAMS. Sh. of Jamaica. Pfeiffer. Mon. Vol. VI. p. 377.

Hab. Jamaica.

Species 100. (Mus. Sowerby.)

CYLINDRELLA PORRECTA. *Cyl. testâ fulvâ, gracili, fusiformi, lævigatâ; anfractibus* 17, *superioribus senis angustissimis, pellucidis, alteris subinflatis, ultimo subcontracto, longè soluto; aperturâ obliquâ distanti, rotundo.*

THE UPRIGHT CYLINDRELLA. Shell fulvous, slender, fusiform, smooth, whorls 17, upper 6 very narrow, pellucid, others a little inflated, last rather contracted, unwound some length; aperture oblique, distant, round.

GOULD. Pfeiffer. Mon. Vol. VI. p. 384.

Hab. Cuba.

Species 101. (Mus. Sowerby.)

CYLINDRELLA TENELLA. *Cyl. testâ fulvâ, lævigatâ, cylindricâ, supernè subattenuatâ; anfractibus permanentibus duodecim, rectilateralibus, lentissimè crescentibus, ultimo alto; aperturâ magnâ, approximatâ, obliquè subquadratâ.*

THE THIN LITTLE CYLINDRELLA. Shell fulvous, smooth, cylindrical, rather narrowed above; permanent whorls twelve, straight-sided, slowly increased, last high; aperture large, approximate, almost obliquely square.

ADAMS. Pfeiffer. Mon. Vol. VI. 359.

Hab. Jamaica.

Species 102. (Mus. Sowerby.)

CYLINDRELLA NOTATA. *Cyl. testâ gracillimâ, fusiformi, pellucidâ, sublævigatâ, corneâ; anfractibus* 17, *angustis, convexis, superioribus contractis, apicali rotundo, ultimo vix soluto; aperturâ obliquâ; margine rotundo.*

THE MARKED CYLINDRELLA. Shell very slender, fusiform, pellucid, rather smooth, horny; whorls 17, narrow, convex, upper contracted, apical round, last hardly unwound; aperture oblique; margin round.

GUNDLACH. MS. Pfeiffer in Malak. Bl. XI. 1863, p. 10.

Hab. —— 'Sierra de Gueira.' Cuba.

The spiral band above the suture, spoken of in the description, and whence the species derives its name, is not visible in the specimen in our hands.

Species 103. (Mus. Sowerby.)

CYLINDRELLA BULBIFORMIS. *Cyl. testâ breviter fusiformi, roseâ, tenuissimè striatâ, ventricosâ; anfractibus apicalibus contractis, medianis convexis, inflatis, ultimo angustato, rimato, vix soluto; aperturâ magnâ subrotundâ; margine rotundo.*

THE BULB-SHAPED CYLINDRELLA. Shell shortly fusiform, pink, very finely striated, ventricose; apical whorls contracted, middle convex, inflated, last narrow, notched, hardly unwound; aperture large, rather round; margin round.

SOWERBY.

Hab. —— ?

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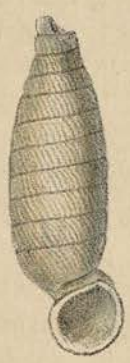

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G.B. Sowerby del et lith.

Vincent Brooks Day & Son Imp.

CYLINDRELLA.

PLATE XII.

Species 104. (Mus. Sowerby.)

CYLINDRELLA COSTULATA. *Cyl. testâ brevi, pyramidatâ, validè distanter costatâ, albidâ; anfractibus novenis, æqualiter crescentibus, convexis; ultimo longissimè soluto et producto; aperturâ distanti, subquadrilaterali.*

THE SMALL-RIBBED CYLINDRELLA. Shell short, pyramidal, strongly distantly ribbed, whitish; whorls 9, equally increasing, convex; aperture distant, subquadrilateral.

ADAMS. Sh. of Jamaica. Pfeiffer. Mon. Vol. VI. p. 381.

Hab. Cuba.

Species 105. (Mus. Sowerby.)

CYLINDRELLA PLICATA. *Cyl. testâ brevi, albidâ, pyramidato-fusiformi, tenuiter crebrè costulatâ; anfractibus superioribus valdè attenuatis, medianis et inferioribus ventricosis, ultimo subangustato, soluto; aperturâ distanti, rotundâ.*

THE PLAITED CYLINDRELLA. Shell short, whitish, pyramidal-fusiform, finely closely ribbed; upper whorls much attenuated, middle and lower ventricose, last rather narrow, unwound; aperture distant, rounded.

POEY. Pfeiffer. Mon. Vol. VI. p. 389.

Hab. Cuba.

Species 106. (Mus. Sowerby.)

CYLINDRELLA ARTEMESIÆ. *Cyl. testâ roseo-fulvâ, subfusiformi, solidiùsculâ, obliquè striatâ; anfractibus permanentibus decenis, subrectilateralibus, ultimo subcontracto, breviter soluto; aperturâ subapproximatâ, rotundâ, margine rotundo.*

THE ARTEMESIAN CYLINDRELLA. Shell pinkly-fulvous, rather fusiform, rather solid, obliquely striated; permanent whorls ten, nearly straight-sided, last a little contracted, with a short unwinding; aperture rather near, round, margin round.

GUNDLACH. Pfeiffer. Mon. Vol. VI. p. 380.

Hab. Artemesia, Cuba.

Species 107. (Mus. Sowerby.)

CYLINDRELLA FILICOSTATA. *Cyl. testâ fusiformi, purpureo-fuscâ, ventricosâ, costis filiformibus frequentibus albis ornatâ; anfractibus permanentibus* 19, *superioribus angustatis, medianis subinflatis, ultimo rimato, laxato; aperturâ pyriformi, supernè acuminato.*

THE THREAD-RIBBED CYLINDRELLA. Shell fusiform, purple-brown, ventricose, ornamented with numerous filiform ribs; permanent whorls 19, upper narrow, middle rather inflated, last notched, unwound; aperture pyriform, acuminated above.

SHUTTLEWORTH. Pfeiffer. Mon. Vol. VI. p. 378.

Hab. Mexico.

Species 108. (Mus. Sowerby.)

CYLINDRELLA CORONADOI. *Cyl. testâ sinistrali, subcylindricâ, albidâ, solidiùsculâ, costulis tenuibus, subremotis sculptâ; anfractibus permanentibus decenis, superioribus angustatis, ultimo rimato; aperturâ approximatâ, rotundâ, margine rotundo.*

THE CORONADO CYLINDRELLA. Shell sinistral, subcylindrical, whitish, rather solid, sculptured with thin rather remote ribs; permanent whorls ten, superior narrow, last notched; aperture approximate, rounded, margin rounded.

ARANGO. Pfeiffer. Mon. Vol. VI. p. 379.

Hab. Near Havanna, Cuba.

Species 109. (Mus. Sowerby.)

CYLINDRELLA COSTATA. *Cyl. testâ brevi, stramineâ, subcylindricâ, sursùm subattenuatâ; anfractibus permanentibus novenis, subrectè striatis, subrectilateralibus, ultimo longè rimato; aperturâ subobliquè productâ.*

THE RIBBED CYLINDRELLA. Shell short, straw, subcylindrical, attenuated upwards; permanent whorls nine, with rather straight striæ, nearly straight-sided, last with a long notch; aperture rather obliquely produced.

GUILDING. Pfeiffer. Mon. Vol. VI. 381.

Hab.——?

Species 110. (Mus. Brit.)

CYLINDRELLA HYALINA. *Cyl. testâ pupœformi, ventricosâ, albidâ, semipellucidâ; anfractibus permanentibus decenis, subobliquè costatis, tribus superioribus sensim contractis, alteris subœqualibus, ultimo contracto, longè rimato, breviter soluto; aperturâ magnâ, supernè subacuminatâ.*

THE HYALINE CYLINDRELLA. Shell pupa-shaped, ventricose, whitish, semipellucid; permanent whorls ten, rather obliquely ribbed, three upper sensibly contracted, the others nearly equal, last contracted with a long notch, shortly unwound; aperture large, ovate, subacuminated above.

PFEIFFER. Mon. Hel. Vol. VI. p. 359.

Hab. Mexico.

Species 111. (Mus. Sowerby.)

CYLINDRELLA ROBERTSII. *Cyl. testâ brevi, cylindraceâ, fuscâ, striatâ; anfractibus permanentibus septenis, subœqualibus, superioribus vix angustatis, ultimo infrà angulato, longè soluto; aperturâ distanti, subtrigonâ, supernè lato, infrà subacuminato.*

ROBERTS'S CYLINDRELLA. Shell short, cylindrical, brown, striated; permanent whorls seven, nearly equal, upper scarcely narrowed, last angular below, unwound for a long part; aperture distant, subtrigonal, broad above, rather acuminated below.

ADAMS. Pfeiffer. Mon. Vol. VI. p. 383.

Hab. Jamaica.

Species 112. (Mus. Sowerby.)

CYLINDRELLA ORNATA. *Cyl. testâ cylindricâ, griseâ, sparsim tenuiter costatâ, costis ad suturam in tuberculas regularibus terminatis; anfractibus permanentibus decenis, superioribus tribus contractis, alteris subœqualibus, ultimo alto, rimato, breviter soluto; aperturâ subdistanter obliquè productâ.*

THE ADORNED CYLINDRELLA. Shell cylindrical, grey, sparsely thin-ribbed, ribs terminating at the suture in regular tubercles; permanent whorls ten, upper three contracted, others nearly equal, last high, notched, shortly uncoiled; aperture rather distantly obliquely produced.

GUNDLACH. Pfeiffer. Mon. Vol. VI. p. 382.

Hab. Yateras, Cuba.

Species 113. (Mus. Sowerby.)

CYLINDRELLA CONCRETA. *Cyl. testâ brevi, subfusiformi, lævi, albidâ, semipellucidâ, medio ventricosâ, infrà paulò contractâ; anfractibus decenis, ultimo subangustato, rimato; aperturâ approximatâ, subrotundâ.*

THE CONCRETE CYLINDRELLA. Shell short, subfusiform, smooth, whitish, semipellucid, ventricose in the middle, a little contracted below; whorls 10, last rather narrow, notched; aperture near, rather rounded.

GUNDLACH. Pfeiffer. Mon. Vol. VI. p. 363.

Hab. Cuba.

115 a.

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115 b.

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G.B. Sowerby del et lith.

Vincent Brooks Day & Son Imp.

CYLINDRELLA.

PLATE XIII.

Species 114. (Mus. Brit.)

CYLINDRELLA PETIVERIANA. *Cyl. testâ breviùscultâ, solidâ, cylindricâ, albidâ; anfractibus permanentibus septenis, lentissimè crescentibus, undulatim costatis; inter costas angulatim et undulatim irregulariter sculptis; ultimo subangustato, rimato, aperturâ obliquè subovatâ, margine duplicato.*

PETIVER'S CYLINDRELLA. Shell rather short, solid, cylindrical, whitish; permanent whorls seven, very slowly increased, with wavy ribs, angularly and wavily sculptured between the ribs; last rather angular, notched; aperture obliquely subovate, margin double.

FERRUSSAC. Pfeiffer. Mon. Vol. VI. p. 391.

Hab. Antilles.

Species 115. (Fig. *a*, *b*, Mus. Brit.)

CYLINDRELLA CLAVA. *Cyl. testâ succineo-fuscâ seu albidâ, tenui, altissimâ, graciliformi, supra medium gradatim attenuatâ; anfractibus depressis, tenuissimè striatis, permanentibus viginti, deciduis decenis, ultimo infrà angulato, longè rimato, soluto; aperturâ subdistanti, obliquè ovatâ, supernè subacuminatâ.*

THE KEY CYLINDRELLA. Shell amber brown or whitish, thin, much raised, slender, gradually attenuated above the middle; whorls depressed, very finely striated, twenty permanent, ten deciduous, last angular below, with a long notch; aperture rather distant, obliquely ovate, slightly acuminated above.

PFEIFFER. Mon. Vol. VI. p. 365.

Hab. Chiappa, Mexico.

Species 116. (Mus. Brit.)

CYLINDRELLA LEIBMANNI. *Cyl. testâ solidâ, ventricosissimâ, lævigatâ, flavido-coffeâ, prope suturas densiori; anfractibus permanentibus octonis, convexis, medio latissimis; suprà infràque gradatim angustioribus, ultimo rimato ad aperturam, paulò soluto; aperturâ obliquè pyriformi, supernè subacuminatâ.*

LEIBMANN'S CYLINDRELLA. Shell solid, very ventricose, smooth, yellowish-coffee, more dense at the sutures; permanent whorls eight, convex, very wide in the middle, gradually narrower above and below; last notched at the aperture, a little unwound; aperture obliquely pyriform, slightly acuminated above.

PFEIFFER. Mon. II. p. 370.

Hab. Mexico.

Species 117. (Mus. Brit.)

CYLINDRELLA TURRIS. *Cyl. testâ altâ, ventricosâ, supernè attenuatâ, coffeâ, tenuiter striatâ; anfractibus circa triginti, inferioribus duodecim subæqualibus, rectilateralibus, latis; ultimo truncato, rimato; aperturâ approximatâ, subobliquâ, latâ, columellâ latâ, infrà canaliculatâ.*

THE TOWER CYLINDRELLA. Shell high, ventricose, attenuated above, coffee-coloured, finely striated; whorls about thirty, lower twelve rather equal, straight-sided, broad; last truncated, notched; aperture near, rather oblique, broad, columella broad, with a channel below.

PFEIFFER. Mon. IV. p. 696.

Hab. Chiappa, Mexico.

Species 118. (Mus. Brit.)

CYLINDRELLA BOUCARDI. *Cyl. testâ altâ, cylindricâ, subæqualiter ventricosâ, stramineâ; anfractibus permanentibus novenis, altis, rectilateralibus, ultimo infrà contracto, rimato, supra marginem aperturâ arcuatâ; aperturâ obliquè subpyriformi, supernè subacuminatâ.*

BOUCARD'S CYLINDRELLA. Shell high, cylindrical, rather equally ventricose, straw; permanent whorls nine, high, rectilateral, last contracted below, notched, arched above the margin of the aperture; aperture obliquely subpyriform, slightly acuminated above.

SALLÉ. Proc. Zool. Soc. 1853, T. XXXIII. f. 1.

Hab. Cordova and Orizaba, Mexico.

Species 119. (Mus. Brit).

Cylindrella recticosta. *Cyl. testâ albidâ, costis solidis, rectis, distantibus sculptâ, medio infràque cylindricâ, supernè sensim contractâ; anfractibus permanentibus tredecim, septenis inferioribus subæqualibus, vix convexis; suturâ profundâ, ultimo rimato; aperturâ approximatâ, latâ, margine crasso.*

The straight-ribbed Cylindrella. Shell whitish, sculptured with solid, straight, distant ribs, cylindrical in the middle and below, sensibly contracted above; permanent whorls thirteen, seven lower nearly equal, hardly convex; suture deep, last notched; aperture approximate, broad, margin thick.

Pfeiffer. Mon. II. p. 369.

Hab. Oajaca, Mexico.

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121b

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G.B Sowerby. del. et lith.

Vincent Brooks Day & Son, Imp.

CYLINDRELLA.

PLATE XIV.

Species 120. (Mus. Sowb.)

CYLINDRELLA DOMINICENSIS. *Cyl. testâ brevi, fulvâ, subfusiformi; anfractibus novenis, subconvexis, ultimo longè soluto; aperturâ distanti, parvâ, obliquè subovatâ, margine rotundo.*

THE DOMINICAN CYLINDRELLA. Shell short, fulvous, subfusiform; whorls nine, rather convex, last with long part unwound; aperture distant, small, obliquely subovate, margin rounded.

PFEIFFER. Mon. III. p. 574.

Hab. Haiti, Peru.

Species 121. (Fig. *a*, *b*, Mus. Brit.)

CYLINDRELLA VOLUBILIS. *Cyl. testâ altâ, fulvâ, semipellucidâ, angustè cylindricâ, lævigatâ, nitenti; anfractibus octodecenis, inferioribus decenis subæqualibus, rectilateralibus; ultimo soluto, obliquè ad aperturam declivi; aperturâ obliquè ovatâ.*

THE VOLUBLE CYLINDRELLA. Shell high, fulvous, semipellucid, narrowly cylindrical, smooth, shining; whorls eighteen, lower ten nearly equal, straight-sided; last unwound, sloped down obliquely towards the aperture; aperture obliquely ovate.

MORELET. Pfeiffer. Mon. III. p. 576.

Cylindrella saxosa. Poey.

Hab. Cuba.

Species 122. (Fig. *a*, *b*, Mus. Brit.)

CYLINDRELLA SCÆVA. *Cyl. testâ sinistrali, pupæformi, tenuissimè striatâ, coffeâ; anfractibus permanentibus decenis, convexiùsculis, superioribus contractis, medianis inflatis, inferioribus subangustatis; aperturâ subdistanti, latâ.*

THE LEFT-HANDED CYLINDRELLA. Shell sinistral, pupa-shaped, very finely striated, coffee-coloured; permanent whorls ten, rather convex, upper contracted, middle inflated, lower rather narrowed; aperture a little distant, broad.

GUNDLACH. Pfeiffer. Malak. Bl. 1863.

Hab. Near Matanzas, Cuba.

Species 123. (Mus. Brit.)

CYLINDRELLA ARCTISPIRA. *Cyl. testâ altâ, solidâ, albidâ, cylindricâ, medio subinflato; anfractibus permanentibus quindecenis, compressis, valdè convexis, costis validis, arcuatis, crebris, sculptis; ultimo rimato; aperturâ magnâ, rotundâ, margine crasso.*

THE BOW-SPIRED CYLINDRELLA. Shell raised, solid, white, cylindrical, middle rather inflated; permanent whorls fifteen, compressed, very convex, sculptured with strong, arched, numerous ribs; last notched; aperture large, rounded, margin thick.

PFEIFFER. Proc. Zool. Soc. 1860, p. 139.

Hab. Juquila, Mexico.

Species 124. (Mus. Brit.)

CYLINDRELLA TOMACELLA. *Cyl. testâ altâ, subcylindricâ, tenuissimè striatâ, succineo-rubescenti; anfractibus permanentibus duodecenis, octonis inferioribus subæqualibus, rectilateralibus; ultimo subcontracto; rimato, soluto; aperturâ obliquè subpyriformi, distanti, supernè subacuminatâ.*

THE LONG-PUDDING CYLINDRELLA. Shell high, subcylindrical, very finely striated, reddish amber; permanent whorls twelve, eight lower nearly equal, rectilateral, last a little contracted; notched, uncoiled; aperture obliquely subpyriform, distant, acuminated above.

MORELET. Pfeiffer. Mon. III. p. 568.

Cylindrella Moreleti. Deshayes.

Hab. Guatemala.

Species 125. (Mus. Brit.)

CYLINDRELLA SUBTILIS. *Cyl. testâ gracili, altâ, subfusiformi, griseo-fuscâ, lævigatâ, supernè longè contractâ, infra medium subventricosâ; anfractibus viginti, inferioribus quinis senis, superioribus quindecenis angustissimis, ultimo infrà attenuato, soluto; aperturâ majùsculâ, ovatâ, distanti, margine reflexo.*

THE SUBTLE CYLINDRELLA. Shell slender, high, rather fusiform, grey-brown, smooth, with a long part contracted above, rather ventricose below the middle; whorls twenty, lower five full, upper fifteen extremely narrow, last attenuated below, unwound; aperture rather large, oval, distant, margin reflected.

MORELET. Pfeiffer. Mon. III. p. 577.

Hab. Gautemala.

Species 126. (Mus. Brit.)

CYLINDRELLA CINEREA. *Cyl. testâ fusiformi, altâ, griseâ, obliquè costatâ, ultimo anfractu medio torto, contracto, elongato, longè soluto; aperturâ rotundâ, distanti, declivi.*

THE CINEREOUS CYLINDRELLA. Shell fusiform, high, grey, obliquely ribbed, last whorl tortuous in the middle, contracted, lengthened, much unwound; aperture rounded, distant, sloped.

PFEIFFER. Mon. III. p. 578.

Hab. Cuba.

Species 127. (Mus. Brit.)

CYLINDRELLA ZEBRINA. *Cyl. testâ solidiùsculâ, subventricosâ, subpyramidatâ, fulvâ, fasciis perpendicularibus fuscis pictâ; anfractibus permanentibus novenis, lævigatis, convexis; aperturâ ovatâ, marginè crasso.*

THE ZEBRA CYLINDRELLA. Shell rather solid, rather ventricose, subpyramidal, fulvous, painted with perpendicular brown bands; permanent whorls nine, smooth, convex; aperture ovate, margin thick.

PFEIFFER. Mon. III. p. 584.

Hab. Jamaica.

128

129

130

131

132

133

134 *a*

134 *b*

134 *c*

134 *d*

G.B. Sowerby, del. et lith.

Vincent Brooks Day & Son, Imp.

CYLINDRELLA.

PLATE XV.

Species 128. (Mus. Brit.)

CYLINDRELLA SEXDECIMALIS. *Cyl. testâ gracillimâ, fusiformi, fulvâ, tenui, semipellucidâ, lævigatâ; anfractibus sexdecenis, convexis; apicali globoso, sequentibus senis attenuatis, medianis inflatis, ultimo longissimè obliquè soluto, striato; aperturâ distanti, rotundâ, margine crasso.*

THE SIXTEEN-WHORLED CYLINDRELLA. Shell very narrow, fusiform, fulvous, thin, semipellucid, smooth; whorls sixteen, convex; apical subglobose, six following attenuated, middle inflated, last with a long piece uncoiled, striated; aperture distant, rounded, margin thick.

JIMENO. MS. Pfr. Mon. Vol. VI, p. 384.

Hab. Bermeja vieja, Cuba.

The variegation spoken of in the original description is not perceptible in the British Museum specimens.

Species 129. (Mus. Brit.)

CYLINDRELLA APIOSTOMA. *Cyl. testâ gracillimâ, subcylindricâ, fulvâ; anfractibus octodecenis, supra medium attenuatis, infrà subæqualibus, ultimo distorto, striato, soluto; aperturâ subdistanti, subtrigonâ, supernè latâ, infrà subcontractâ.*

THE DESCENDING-MOUTHED CYLINDRELLA. Shell very slender, subcylindrical, fulvous; whorls eighteen, attenuated above the middle, nearly equal, last distorted, striated, uncoiled; aperture rather distant, subtrigonal, broad above, rather contracted below.

PFEIFFER. Mon. IV. p. 703.

Hab. Cordova, Mexico.

Species 130. (Mus. Brit.)

CYLINDRELLA GRACILLIMA. *Cyl. testâ gracillimâ, fulvâ, prope apicem contractâ, supra medium subinflatâ, medio et infrà subcontractâ; ultimo anfractu elongato, infrà attenuato, perobliquè soluto; aperturâ latâ, margine subexpanso.*

THE VERY SLENDER CYLINDRELLA. Shell very thin, fulvous, contracted near the apex, somewhat inflated above the middle, rather contracted at and below the middle; last whorl elongated, attenuated below, very obliquely unwound; aperture broad, margin a little expanded.

POEY. Pfeiffer, Mon. III. p. 576.

Hab. Cuba.

The swelled portion of this narrow shell is above the middle of the lengthened spire.

Species 131. (Mus. Brit.)

CYLINDRELLA VARIEGATA. *Cyl. testâ breviùsculâ, latiùsculâ, cylindricâ, tenuiter liratâ, fulvâ et subroseâ, obliquè fasciis fuscis variegatâ; anfractibus permanentibus novenis, moderatè convexis, supra medium gradatim attenuatis, ultimo rimato, breviter soluto: aperturâ subdistanti, ovatâ, obliquâ, margine subrotundo.*

THE VARIEGATED CYLINDRELLA. Shell rather short, rather broad, cylindrical, finely ridged, fulvous and pinky, variegated with oblique brown bands; permanent whorls nine, moderately convex, gradually attenuated above the middle, last notched, shortly uncoiled; aperture rather distant, ovate, oblique, margin rather rounded.

PFEIFFER. Mon. II., p. 374.

Hab. Cuba, Florida.

Species 132. (Mus. Brit.)

CYLINDRELLA PHILIPPIANA. *Cyl. testâ gracili, fusiformi, fulvâ, regulariter, subdistanter, tenuiter costatâ; anfractibus octodecenis, apicalibus inflatis, globosis, sequentibus septenis angustis, medianis subinflatis, ultimo subcontracto, longè soluto; aperturâ obliquè ovatâ, margine crasso.*

PHILIPPI'S CYLINDRELLA. Shell slender, fusiform, fulvous, regularly, rather distantly, finely ribbed; whorls eighteen, apical inflated, globose, seven following narrow, middle rather inflated, last rather narrowed, with long unwinding; aperture obliquely ovate, margin thick.

PFEIFFER. Mon. II. p. 378.

Cylindrella aculeus. Morelet.

Hab. Cuba.

Species 133. (Mus. Brit.)

CYLINDRELLA CUMINGIANA. *Cyl. testâ brevi, pupæformi, lævigatâ, versus apicem inflatâ, infrà attenuatâ; anfractibus octonis, ultimo contracto, rimato, longè soluto; aperturâ auriformi, supernè subacuminato.*

CUMING'S CYLINDRELLA. Shell short, pupa-shaped, smooth, inflated towards the apex, attenuated below; whorls eight, last contracted, notched, with lengthened portion unwound; aperture ear-shaped, rather acuminated.

PFEIFFER. Mon. II. p. 385.

Hab. Philippine Islands.

Species 134. (Fig. *a*, *b*, *c*, *d*, Mus. Brit.)

CYLINDRELLA MAUGERI. *Cyl. testâ pyramidatâ, lævigatâ, albâ, vel flavidâ, ad aperturam roseâ, vel fusco-nigrescenti, ad suturam albo fasciatâ, medio paulò inflatâ; anfractibus circà decenis, ultimo contracto; aperturâ subovatâ, margine reflexo, interrupto, columellâ flexuosâ.*

MAUGER'S CYLINDRELLA. Shell pyramidal, smooth, white or yellowish-pink at the aperture, or blackish-brown, with white banded suture, a little inflated in the middle; whorls about ten, last contracted; aperture subovate, margin reflected, interrupted, columella flexuous.

WOOD (Helix). Index Testaceologicus.

Pupa splendens. Menke.

Helix ignifera. Ferrussac.

Pupa fusiformis. Adams.

Hab. Jamaica.

135.

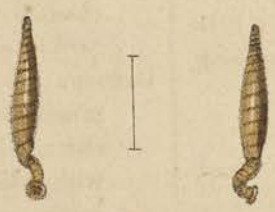
136.

137.

138.

139.

140.



a 141. b

142.

143.

144.

G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

CYLINDRELLA.

PLATE XVI.

Species 135. (Mus. Brit.)

CYLINDRELLA LUCENS. *Cyl. testâ subpyramidatâ, angustâ; albidâ, semipellucidâ, anfractibus duodecenis, gradatim crescentibus, convexis, ultimo angustiùsculo, paulò soluto; aperturâ subrotundâ, supernè depressâ, cuneatâ.*

THE LUCID CYLINDRELLA. Shell subpyramidal, narrow, whitish, semipellucid, whorls twelve, gradually increased, convex, last rather narrow, a little unwound; aperture rather round, depressed above, cuneate.

WRIGHT. MS. Brit. Mus.

Hab. Cuba.

Species 136. (Mus. Brit.)

CYLINDRELLA MORINI. *Cyl. testâ fuscâ, pyramidato-subfusiformi; anfractibus quindecenis, brevibus, perobliquè liratis, superioribus attenuatis, inferioribus paulò magis ventricosis, ultimo longè soluto, subtortuo; aperturâ distanti, transversè oblongâ, utrinque subacuminatâ.*

MORINI'S CYLINDRELLA. Shell brown, pyramido-fusiform; whorls fifteen, short, very obliquely ridged, upper attenuated, lower a little more ventricose; last with a long unwinding, a little twisted; aperture distant, transversely oblong, slightly acuminated on each side.

MORELET. Pfeiffer, Mon. Helic. VI. p. 388.

Hab. Verapaz, Guatemala.

Species 137. (Mus. Brit.)

CYLINDRELLA PLANOSPIRA. *Cyl. testâ angustâ, cylindricâ, semipellucidâ, pallidè succineo-corneâ; anfractibus permanentibus, undecenis brevibus, convexiùsculis; aperturâ distanti, supernè infràque angulatâ.*

THE PLAINSPIRED CYLINDRELLA. Shell narrow, cylindrical, semipellucid, pale horny amber; permanent whorls eleven, rather short, a little convex; aperture distant, angular above and below.

PFEIFFER. Mon Helic. p. 371.

Hab. Monte Cuzco, Cuba.

Species 138. (Mus. Brit.)

CYLINDRELLA MALLEATA. *Cyl. testâ solidâ, albidâ, fuscâ, distanter strigatâ, irregulariter rugis punctulatis angulatis sagrinatâ, ventricosâ, medio inflatâ; anfractibus octonis, latis, breviùsculis; ultimo infrà subangustato, carinato; aperturâ irregulariter subquadrato, margine crasso, rotundo, inæquali.*

THE HAMMERED CYLINDRELLA. Shell solid, whitish, distantly striped with brown, irregularly shagreened with punctured angular wrinkles, ventricose, inflated in the middle; whorls eight, broad, rather short, last a little narrowed and keeled below; aperture irregularly subquadrate, margin thick, round, unequal.

PFEIFFER. Mon. Helic. VI. p. 363.

Hab. St. Domingo.

Species 139. (Mus. Brit.)

CYLINDRELLA CAMOENSIS. *Cyl. testâ fusiformi, attenuatâ, altissimâ, fumoso-castaneâ, anfractibus viginti, brevibus, medio subinflatis, laminis crebris ad suturam suprà infràque prominentibus, medio obsoletis, sculptis; ultimo angustato, soluto; aperturâ rotundâ.*

CAMOENS' CYLINDRELLA. Shell fusiform, attenuated, much elevated, smoky chestnut, whorls twenty, short, a little inflated in the middle, sculptured with numerous laminæ, prominent above and below, and obsolete in the middle; last narrow, unwound; aperture rounded.

PFEIFFER. Mon. Helic. VI. p. 388.

Hab. Cuba.

The fine laminated ridges form rounded scales at the top and bottom of each whorl, and are almost lost in the middle.

Species 140. (Mus. Brit.)

CYLINDRELLA BEARDSLEYANA. *Cyl. testâ pallidè fuscâ, tenuiter liratâ, subpyramidatâ; anfractibus novenis, subconvexis, gradatim crescentibus, liris frequentibus, curvis, interstitiis latioribus.*

BEARDSLEY'S CYLINDRELLA. Shell pale brown, finely ridged, somewhat pyramidal; whorls nine, rather convex, gradually increased, ridges numerous, curved, interstices wider.

C. B. ADAMS. —— ?

Hab. Jamaica.

Species 141? (Mus. Brit.)

CYLINDRELLA TURKASIANA. *Cyl. testâ fusiformi, angustâ, semipellucidâ, lævi, pallidè succineâ; anfractibus septemdecenis, superioribus inferioribusque attenuatis, medianis subinflatis, ultimo longissimè soluto, declivi, rugato, tortuoso; aperturâ parvâ, distantissimâ.*

THE TURCASIAN CYLINDRELLA. Shell fusiform, narrow, semipellucid, smooth, pale amber; whorls seventeen, upper and lower attenuated, middle a little inflated, last with a long piece unwound, sloped downward, wrinkled, twisted; aperture small, very distant.

GUNDLACH. Pfeiffer. Mon. Helic. VI. p. 385.

Lescallei. Gundlach ?

Hab. Monte Toro, Cuba.

Species 142. (Mus. Brit.)

CYLINDRELLA RUGELIANA. *Cyl. testâ parvâ, angustè pyramidatâ, opacâ, fulvâ, distanter strigatâ; anfractibus quaterdecenis, tenuiter acutè liratis, brevissimis ultimo longè soluto, tortuoso; aperturâ parvâ, distanti; apice attenuato, acuminato.*

RUGELI'S CYLINDRELLA. Shell small, narrowly pyramidal, opaque, fulvous, distantly striped; whorls fourteen, finely, acutely ridged, very short, last with long portion unwound, twisted; aperture small, distant; apex attenuated, acuminated.

SHUTTLEWORTH. Pfeiffer. Mon. Hel. VI. p. 368.

Hab. Cuba.

Species 143. (Mus. Brit.)

CYLINDRELLA PUPÆFORMIS. *Cyl. testâ brevi, lævi, cylindricâ, semipellucidâ, albâ, vel castaneâ; anfractibus permanentibus senis, brevibus, convexis; ultimo breviter soluto, aperturâ subdistanti, magnâ, margine crasso, subrotundo.*

THE PUPA-SHAPED CYLINDRELLA. Shell short, smooth, cylindrical, semipellucid, white or chestnut; permanent whorls six, short, convex; last with short unwinding; aperture rather distant, large, margin thick, rather rounded.

C. B. ADAMS. Pfeiffer, Mon. Helic. VI. p. 370.

Hab. Jamaica.

Species 144. (Mus. Brit.)

CYLINDRELLA UNCATA. *Cyl. testâ cylindricâ, solidiùsculâ, latiùscula, pallidè corneâ, medio paulò inflato; anfractibus undecenis, brevibus, subdistanter liratis; ultimo subangustato, soluto, versus aperturam coarctato; liris anfractuum ad suturam suprà infràque quasi uncinatis, aperturâ distanti, subtrigonâ.*

THE HOOKED CYLINDRELLA. Shell cylindrical, very solid, rather broad, pale horn; a little inflated in the middle; whorls eleven, short, rather distantly ridged, last rather narrow, unwound, contracted towards the aperture; ridges of the whorls, as it were, hooked at the suture above and below; aperture distant, subtrigonal.

GUNDLACH. Pfeiffer. Mon. Helic. VI. p. 382.

Hab. Yateras, Cuba.

The tubercles formed at the sutures on the ridges have the appearance of little hooks.

CYLINDRELLA.

	Plate.	Species.
aculeus, Morelet.	XV.	132
acus, *Pfeiffer*.	VII.	62
Adamsiana, *Pfeiffer*	II.	16
Agnesiana, *Adams*	V.	43
alabastrina, *Pfeiffer*	IX.	81
albo-crenata, *Pfeiffer*	IV.	27
alta, *Sowerby* (cylindrus by error)	VIII.	58
amethystina, *Chitty*	II.	15
angustæ, *Adams*	VII.	63
angustior, *Wright*	XI.	97
antiperversa	XI.	35
apiostoma, *Pfeiffer*	XV.	129
arctispira, *Pfeiffer*	XIV.	123
arcuata, *Martens*	VI.	49
aritispica, *Pfeiffer*	I.	5
artemesiæ, *Gundlach*	XII.	106
asperata, *Sowerby* (aspera by error).	XI.	98
aspera, *Adams*	I	1
Auberiana, Orbigny	IV.	36
Beardsleyana, *Adams*	XVI.	140
Binneyana, Pfeiffer	VI.	53
Boucardi, *Sallé*	XIII.	118
Brookesiana, *Gundlach*	VI.	52
brunnescens, *Gundlach*	X.	92
bulbiformis, *Sowerby*	XI.	103
carinata, *Pfeiffer*	VIII.	67
camoensis, *Pfeiffer*	XVI.	139
cærulans, *Poey*	III.	21
Chemnitziana, Ferrussac	IV.	33
chordata, *Pfeiffer*	V.	38
cinerea, *Pfeiffer*	XIV.	126
clara, *Wright*	IX.	82
clava, *Pfeiffer*	XIII.	115
collaris, Ferrussac	XI.	95
columella	III.	25
concreta, *Gundlach*	XII.	113
cornea, Adams	II.	12
Coronadoi, *Avango*	XII.	108
costata, *Guilding*	XII.	109
costatus, Gray	IV.	30
costulata, *Adams*	XII.	104
costulosa, Adams	IV.	30
crispula, *Pfeiffer*	V.	39
Cumingii, Adams	IV.	33
Cumingiana, *Pfeiffer*	XV.	133
cylindrus, *Chemnitz*	II.	9
cylindrus. See alta.	VIII.	68
denticulata, *Pfeiffer*	III.	22
Dominicensis, *Pfeiffer*	XIV.	120
Dunkeriana, *Pfeiffer*	VIII.	69
elegans, *Pfeiffer*	IV.	36
Ellioti. *Poey*	VI.	47
elongata, *Chemnitz*	IV.	33
eximia, *Pfeiffer*	I.	6
Fabreana, *Poey*	VIII.	70
fastigiata, *Gundlach*	IV.	34
fibrosa		
filicostata, *Shuttleworth*	XII.	107
flammulata, *Pfeiffer*	II.	8
fusiformis, Adams	XV.	134
Garciana, *Wright*	VIII.	66
Gheisbrighti, *Pfeiffer*	I.	7
goniostoma	VIII.	72
Gossei, *Pfeiffer*	IV.	35
gracilis, *Wood*	IX.	78
gracillima, *Poey*	XV.	130
grandis, *Pfeiffer*	I.	4
Gravesii, *Adams*	III.	18
Hanleyana, *Pfeiffer*	V.	37
Hilleri, *Pfeiffer*	XI.	96
Hollandi, *Pfeiffer*	IX.	76
Humboldtiana, *Pfeiffer*	III.	25
hyalina, *Pfeiffer*	XII.	110
ignifera, Ferrussac	XV.	134
illamellata, *Wright*	X.	87
inornata, *Adams*	XI.	99
integra, *Pfeiffer*	X.	93
intermedia, *Sowerby*	X.	91
interrupta, *Gundlach*	VIII.	71
intusmalleata, *Gundlach*	VII.	64
irrorata, *Gundlach*	IV.	32
lata, *Adams*	VII.	58
Lateradii, *Grateloup*	X.	86
Lavalliana, *Orbigny*	VII.	56
Leibmani, *Pfeiffer*	XIII.	116
Lescallei	XVI.	141
lituus, Gould	IV.	36
lucens, *Wright*	XVI.	135

	Plate.	Species.
macrostoma, *Pfeiffer*	III.	26
malleata, *Pfeiffer*	XVI.	138
maugerii, *Wood*	XV.	134
megacheila, *Chitty*	VI.	54
Mexicana, *Pfeiffer*	VII.	61
microstoma, *Pfeiffer*	V.	42
montana, *Adams*	V.	44
Moreleti, *Pfeiffer*	VII.	59
Morini, Morelet	XVI.	136
multispiralis, *Sowerby*	IX.	79
nobilior, *Adams*	VI.	53
nobilis, Heutz	IV.	36
notata, *Gundlach*	XI.	102
obesa, *Martens*	VIII.	73
obliqua, *Pfeiffer*	IV.	28
obtorta, Menke	IV.	36
ornata, *Gundlach*	XII.	112
oviedoiana, *D'Orbigny*	II.	13
pallida, *Guilding*	IV.	30
perlata, *Pfeiffer*	X.	88
perplicata, *Ferrussac*	IV.	29
Petiveriana, *Ferrussac*	XIII.	114
Philippiana, *Pfeiffer*	XV.	132
Piloceri, *Pfeiffer*	VI.	48
planospira, *Pfeiffer*	XVI.	137
planulata	II.	8
plicata, *Poey*	XII.	105
polygyra, *Pfeiffer*	VII.	57
porrecta, *Gould*	XI.	100
procera, *Adams*	II.	14
producta, *Gundlach*	X.	89
pruinosa, *Morelet*	IV.	31
puncturata, *Pfeiffer*	III.	24
pupæformis, *Adams*	XVI.	143
purpurea, Gray	II.	9
recticosta, *Pfeiffer*	XIII.	119
Robertsii, *Adams*	XII.	111
rosea, *Adams*	II.	11
rubella, Adams	II.	9
Rugeliana, *Shuttleworth*	XVI.	142
Rüsei, *Pfeiffer*	XI.	94
Salleana, *Pfeiffer*	V.	40
sanguinea, *Chemnitz*	II.	12
Sauvalliana, *Gundlach*	VI.	50
saxosa, Poey	XIV.	121
scæva, *Gundlach*	XIV.	122
scalarina, *Shuttleworth*	IX.	74
seminuda, *Adams*	V.	46
sexdecimalis, *Jimeno*	XV.	128
Shuttleworthiana, *Poey*	III.	23
soluta, *Pfeiffer*	IX.	75
Sowerbiana, *Pfeiffer*	III.	20
speciosa, *Dunker*	I.	2
splendens, Menke	XV.	134
splendida, *Pfeiffer*	I.	3
striatella, *Wright*	VII.	55
subtilis, *Morelet*	XIV.	125
suturalis, *Weinland*	III.	19
teneila, *Adams*	XI.	101
teres, *Menke*	V.	45
tomacella, *Morelet*	XIV.	124
Teneriensis, *Wright*	X.	84
transaperta, *Sowerby*	IX.	77
Trinitaria, *Pfeiffer*	V.	41
trochæformis, *Sowerby*	IX.	80
troncatula	XI.	35
tumidiora, *Sowerby*	VIII.	65
turris, *Pfeiffer*	XIII.	117
Turkassiana, *Gundlach*	XVI.	141
uncata, *Gundlach*	XVI.	144
variegata, *Pfeiffer*	XV.	131
Vignalensis, *Wright*	IX.	83
violacea, *Wright*	VII.	60
ventricosa, *Gundlach*	III.	17
volubilis, *Morelet*	XIV.	121
Walpolei, *Sowerby*	VI.	51
Wrightii, *Pfeiffer*	X.	85
zebrina, *Pfeiffer*	XIV.	127
zonata, *Adams*	II.	10

MONOGRAPH

OF THE GENUS

PUPA.

Things that were not, at Thy command,
In perfect form before Thee stand;
And all to their Creator raise
A wondrous harmony of praise.

1

2. a.

2. b.

3. a.

4. a.

4. b.

3. b.

5.

6.

7.

Sowerby, del et lith

Vincent Brooks Day & Son, Imp

PUPA.

PLATE I.

Genus PUPA. *Draparnaud.*

Testa terrestris, cylindrica, rimata, plerumque dextralis nonnunquam sinistralis plerumque chrysalidiformis multispiralis, apice obtuso. Apertura frequenter plicata et dentata, margine reflexo, continuo. Operculum nullum.

SHELL TERRESTRIAL. Cylindrical, creased, generally chrysalis-shaped, with many whorls and obtuse apex. Aperture frequently plaited and toothed, margin reflected, continuous. Operculum none.

In the following monograph, which cannot be made absolutely complete in this work, the genera GIBBUS, ENNEA, and VERTIGO are included with the undisputed Pupa. The species are found on most European continents and islands, particularly the more southern parts, and are also abundant in the East and West Indies, South Sea Islands, and other localities too numerous to mention. They are only wanting or rare in the colder climates. The *rima* in this and other genera of pupa-shaped land shells is a crease formed by an abnormal doubling as it were of the last whorl, bringing the mouth by a somewhat sudden turn to the front.

Species 1. (Mus. Sowerby.)

PUPA BRYANTI. *Pup. testâ breviter cylindricâ, breviter rimatâ, albidâ, castaneo-maculatâ; anfractibus octonis, plicis solidis, subdistantibus, rectiusculis munitis; aperturâ ovatâ, margine rotundo, reflexo, columellâ biplicatâ.*

BRYANT'S PUPA. Shell shortly cylindrical, shortly creased, whitish, mottled with chestnut; whorls eight, strengthened with solid, rather distant, rather straight ribs; aperture ovate, margin rounded, reflected; columella with two plaits.

PFEIFFER. Mon. Hel. VI. p. 92.

Hab. South Magna, Bahamas.

From its form and mottled colouring, this species would seem to resemble Pupa Chrysalis with its whorls vertically depressed, but with the addition of two plaits on the columella.

Species 2. (Fig. *a*, *b*, Mus. Brit.)

PUPA GLANS. *Pup. testâ obesâ, chrysalidiformi, solidâ, subcœruleâ, nonnunquam castaneo variegatâ, versùs apicem acuminatâ; anfractibus decenis, costis validis munitis; aperturâ intùs castaneâ, margine aureo, columellâ crassâ, validè biplicatâ.*

THE ACORN PUPA. Shell obese, chrysalis-shaped, solid, bluish, sometimes varied with chestnut, acuminated towards the apex; whorls ten, strengthened with strong ribs; aperture chestnut within, margin golden, columella thick, strongly biplicate.

KÜSTER. Pfeiffer, Mon. Hel.

Hab. New Providence, Bahamas.

Species 3. (Fig. *a*, *b*. Mus. Brit.)

PUPA MUMIA. *Pup. testâ oblongo-chrysalidiformi, subcœruleâ, nonnunquam castaneo variegatâ, versùs apicem acuminatâ, subleviter costatâ; aperturâ aureâ, margine crassimo, columellâ validè biplicatâ, inter plicis profundè sinuatâ.*

THE MUMMY PUPA. Shell oblong-chrysalis-shaped, bluish, sometimes mottled with chestnut, acuminated towards the apex, rather lightly ribbed; aperture golden; margin very thick, columella with two strong plaits, deeply sinuated between the plaits.

BRUGUIENE. Enc. Met.

Pupa sculpta, Poey (var.)

Pupa mumiola? Pfeifer.

Hab. Cuba.

Species 4. (Mus. Brit.)

PUPA PROTEUS. *Pup. testâ latissimâ, breviter cylindricâ, subtruncatâ, cœruleâ, solidâ; anfractibus decenis, superioribus depressis, alteris costis crassis subdistantibus munitis; aperturâ latâ, intùs aureâ, margine crasso, albido, suprà columellam implicato.*

The Proteus Pupa. Shell very wide, shortly cylindrical, somewhat truncated, bluish, solid; whorls ten, upper depressed, others strengthened with slightly distant strong ribs; aperture broad golden within, margin thick, whitish, with a plait above the columella.

Gundlach MS. Pfr. VI. p. 291.

Pupa dimidiata, Pfeifer (*olim*).

Hab. Cuba.

Species 5. (Mus. Brit.)

Pupa Chrysalis. *Pup. testâ elongato-chrysalidiformi, fulvâ castaneo-marmoratâ; costis distantibus, validis; spirâ obtusâ; anfractibus undecenis, inferioribus altis, rectilateralibus; aperturæ margine auriformi, albo, rotundo, columellâ edentulâ.*

The Chrysalis Pupa. Shell elongated, chrysalis-shaped, fulvous, marbled with chestnut; ribs distant, strong; spire obtuse; whorls eleven, lower high, straight-sided; margin of aperture ear-shaped, white, rounded; columella without teeth.

Beck, *Pfeiffer*, Mon. II. p. 314.

Hab. Cuba.

Of a more straight and lengthened cylindrical form than Pupa Mumia and without plaits on the columella.

Species 6. (Mus. Brit.)

Pupa incrassata. *Pup. testâ obesâ, cylindricâ, subtruncatâ, subcœruleâ; costis subobliquis, distantibus, lævibus; aperturâ auriformi, flexuosâ; margine albido, crassissimo; labio externo supernè flexuoso, labio interno validè biplicato.*

The thickened Pupa. Shell obese, cylindrical, slightly truncated, bluish; ribs rather oblique, distant, smooth; aperture auriform, flexuous; margin whitish, very thick; outer lip flexuous above, inner lip with two strong folds.

Sowerby.

Hab. Cuba.

The writer having figured this shell under the name of P. tumida, and finding that name already used for another species, is obliged to re-name it. It resembles P. proteus, but its chief peculiarity is a much thickened and flexuous margin.

Species 7. (Mus. Brit.)

Pupa uva. *Pup. testâ chrysalidiformi, cærulæa, crassicostatâ; anfractibus undecenis, rectilateralibus; aperturâ subovatâ, aureâ, margine interno vix plicato.*

The grape Pupa. Shell chrysalis-shaped, bluish, thick-ribbed; whorls eleven, straight sided; aperture subovate, golden, inner margin scarcely plaited.

Linnæus. Syst. Nat.

Hab. Guadaloupe.

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Sowerby, del et lith.

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PUPA.

PLATE II.

Species 8. (Mus. Brit.)

PUPA MICROSTOMA. *Pup. testâ brevi, acuminatâ, tenuiter liratâ, griseâ, fusco nebulatâ; apice attenuato, flavido; aperturâ parvâ, intùs castaneâ, margine crasso, rotundo, plicâ superiori crasso, plicâ columellari parvâ.*

THE SMALL-MOUTHED PUPA. Shell short, acuminated, finely ridged, grey, clouded with brown; apex attenuated, yellowish; aperture small, chestnut within, margin thick, rounded; upper plait thick, columellar plait small.

PFEIFFER. Monographia Heliceorum, vol. iv. p. 659.

Hab. Haiti.—Porto Rico.—Cuba.

Species 9. (Mus. Sowerby.)

PUPA ANTONI. *Pup. testâ profundè rimatâ, umbilicatâ, brevi, obtusâ, tenuiter liratâ, griseo-rubescenti marmoratâ; aperturâ majusculâ, intùs castaneâ, margine albo, subexpanso, plicis duabus parvis armato.*

ANTON'S PUPA. Shell deeply notched, umbilicated, short, obtuse, finely ridged, marbled with reddish-grey; aperture rather large, chestnut within, margin white, rather expanded, armed with two small plaits.

KÜSTER. Pfeiffer, Mon. III. p. 539.

Hab. Berbice.

Species 10. (Mus. Sowerby.)

PUPA MARMORATA. *Pup. testâ brevi, lævigatâ, angustè rimatâ fulvâ, flammis undisque albidis variegatâ; apice pyramidato; aperturâ magnâ, suprà columellam uniplicatâ.*

THE MARBLED PUPA. Shell short, smooth, narrowly notched; fulvous, variegated with white flames and waves; apex pyramidal; aperture large, with a single plait above the columella.

PFEIFFER. Monograph. III. 323.

Hab. Cuba.—Bahamas.

Very beautifully ornamented with enamelled white markings over a pinky-fawn ground.

Species 11. (Mus. Sowerby.)

PUPA INFANDA. *Pup. testâ cylindricâ, profundè rimatâ; umbilicatâ, solidâ, albâ, latâ; anfractibus superioribus ferè lævigatis, ultimis costis regularibus, subdistantibus, sculptis; aperturâ magnâ, intùs fulvâ, suprà columellam plicâ dentiformi parvo munitâ.*

THE UNDESCRIBED PUPA. Shell cylindrical, deeply notched, umbilicated, solid, white, broad; upper whorls almost smooth; the last sculptured with regular ribs; aperture large, fulvous within; provided with tooth-like plait above the columella.

SHUTTLEWORTH. Pfeiffer, Mon. VI. vol. vi. p. 288.

Pupa decumana, Poey.

Hab. Cuba.

This shell differs from *Pupa mumia* in the first whorls being partially denuded of ribs.

Species 12. (Fig. *a*, *b*, Mus. Brit.)

PUPA ZEBRA. *Pup. brevissimâ, rimatâ, tenuiliratâ, fulvescenti, strigis undulatis fuscis longitudinaliter ornatâ; spirâ versùs apicem pyramidatâ, aperturâ parvâ, labio interno angusto, uniplicato, columellâ obliquè uniplicatâ.*

THE ZEBRA PUPA. Shell very short, notched, finely ridged, rather fulvous, longitudinally ornamented with undulated brown stripes; spire pyramidal towards the apex, aperture small, inner lip

narrow, with one plait, columella obliquely one-plaited.

WEINLAND. MS. Brit. Mus.

Hab. Bahamas.

Species 13. (Mus. Brit.)

PUPA MULTICOSTATA. *Pup. testâ oblongâ, albo-griso-scenti, rimatâ, liris validis, crebris, longitudinaliter sculptâ; aperturâ subquadratâ, margine crasso, intùs castaneo, columellâ latâ, obliquè uniplicatâ, labio interno suprà columellam uniplicato.*

THE MANY-RIBBED PUPA. Shell oblong, greyish-white, notched, sculptured longitudinally with strong close ridges; aperture rather square, margin thick, chestnut within, columella broad, obliquely single-plaited, inner lip with one plait above the columella.

KÜSTER. Pfeiffer, Mon. II. p. 323.

Hab. Cuba.

Species 14. (Mus. Brit.)

PUPA CRASSILABRIS. *Pup. testâ subcylindricâ, obtusâ, roseo-albidâ, fusco nebulatâ, tenuiter liratâ; aperturâ subauriformi, biplicato, margine duplicato.*

THE THICK-LIPPED PUPA. Shell subcylindrical, obtuse, pinky-whitish, clouded with brown, finely ribbed; aperture somewhat auriform, two-plaited, margin doubled.

SHUTTLEWORTH —— ?

Hab. India.

Species 15. (Mus. Brit.)

PUPA MARTENSI. *Pup. testâ cylindricâ, rimatâ, tenuissimè liratâ, albidâ, fusco nebulatâ; apice obtuso; aperturâ magnâ, auriformi, biplicatâ, margine crasso.*

MARTEN'S PUPA. Shell cylindrical, notched, very finely ridged, whitish, clouded with brown; apex obtuse; aperture large, ear-shaped, with two plaits, margin thick.

WEINLAND. Malak. Bl. ix. 1862.

Hab. Bahamas.

Species 16. (Mus. Sowerby.)

PUPA MARTINIANA. *Pup. testâ brevissimâ, obscurè roseâ, breviter profundè rimatâ, subpyramidatâ liris distantibus, subarcuatis, propè suturam nodulosis sculptâ; aperturâ subauriformi, margine crasso, supernè angulato, labio interno ad anfractum ultimum uniplicato, columellâ vix plicatâ.*

MARTIN'S PUPA. Shell very short, dull rose, shortly, deeply notched, subpyramidal; sculptured with distant ridges, nodulous near the suture; aperture rather auriform, margin thick, angular above, inner lip with a plait on the last whorl, columella scarcely plaited.

KÜSTER. Pfeiffer, Mon. II. p. 317.

Hab. ——?

This shell is remarkable for having a little knob on the top of each rib at the suture.

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G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

PUPA.

PLATE III.

Species 17. (Mus. Brit.)

PUPA DETRITA. *Pup. testâ lævigatâ, tenui, cylindraceâ, profundè rimatâ, pallidâ; apice obtuso, flavescenti; aperturâ anticè obliquè productâ; labio interno tenui, plicâ minutâ munito, columellâ rectiùsculâ.*

THE WORN PUPA. Shell smooth, thin, cylindrical, deeply notched, pale; apex obtuse, yellowish; aperture anteriorly obliquely produced; inner lip thin, provided with a very small plait, columella rather straight.

SHUTTLEWORTH. Pfr. Mon. VI. as *incana* var.

Hab. Florida.

Species 18. (Fig. *a. b.* Mus. Sowerby.)

PUPA STRIATELLA. *Pup. testâ brevi, pallidè grisescenti vel subroseâ, fusco-rubescenti variegatâ; tenuiter et regulariter liratâ, profundè rimatâ; labio interno plicâ dentiformi validâ munito, columellâ profundâ, brevi, uniplicatâ.*

THE SMALL-STRIATED PUPA. Shell short, pale greyish or slightly pink, variegated with reddish brown, finely and regularly ridged; deeply notched; inner lip provided with a strong tooth-like plait, columella deep, short, with one fold.

FERRUSSAC. Pfeiffer Mon. VI. p. 292.

Hab. Cuba, Haïti, Porto Rico, &c.

Species 19. (Mus. Sowerby.)

PUPA SAGRAIANA. *Pup. testâ breviùsculâ, sublœvigatâ, griseo-rubescenti, rubro-fuscescenti marmoratâ, profundè rimatâ; aperturâ auriformi, magnâ, margine crasso, labio interno et columellâ uniplicatis.*

SAGRA'S PUPA. Shell rather short, rather smooth, greyish-red marbled with brownish-red, deeply notched; aperture auriform, large, margin thick, inner lip and columella with one plait each.

PFEIFFER. Monographia Heliceorum II. p. 322.

Hab. Cuba.

Species 20. (Mus. Sowerby.)

PUPA MARITIMA. *Pup. testâ pallidè cæruleâ, subpyramidatâ, distanter, leviter costatâ, inter costas planulatâ, longè rimatâ, profundè umbilicatâ; aperturâ intùs griseo-fulvâ, profundâ, subtrigonâ, margine crasso, latè reflexo, columellâ profundissimâ, intùs leviter plicato, labio interno tenuiter uniplicato.*

THE MARITIME PUPA. Shell pale blueish, rather pyramidal, distantly, lightly ribbed, flattened between the ribs; with a long notch, and deep umbilicus; aperture fulvous grey within, deep, almost trigonal, margin thick, broadly reflected, columella very deep, slightly plaited within; inner lip with a thin plait.

PFEIFFER. Monographia II. p. 322.

Hab. Cuba.

Species 21. (Mus. Sowerby.)

PUPA RUDIS. *Pup. testâ obesâ, albidâ, tenui, costellis acutis, distantibus liratâ, obliquè rimatâ; aperturâ magnâ, suprà infràque acuminatâ, margine angusto, reflexo, labio interno plicâ elongatâ validâ munito; columellâ vix plicatâ.*

THE ROUGH PUPA. Shell obese, whitish, thin, ridged with sharp, distant riblets, obliquely notched; aperture large, acuminated above and below, margin narrow, reflected, inner lip provided with an elongated strong plait, columella scarcely plaited.

PFEIFFER. Monographia Heliceorum IV. 657.

Hab. —— ?

Species 22. (Mus. Brit.)

PUPA IOSTOMA. *Pup. testâ cylindricâ, latâ, distanter leviter liratâ, cæruleo-albidâ, rubro-purpurascenti marmoratâ et strigatâ, anfractibus altis, rectis, apice acuminato, aperturâ crassâ violaceâ, biplicatâ.*

THE PURPLE-MOUTHED PUPA. Shell cylindrical, broad, distantly lightly ridged, blueish-white marbled or striped with reddish-purple, whorls elevated, straight, apex acuminated, aperture thick, violet, two-plaited.

PFEIFFER. Monographia Heliceorum IV. p. 656.
Hab. Cuba.

The violet colour of the interior of the mouth is very peculiar.

Species 23. (Fig. *a*, *b*, Mus. Brit.)

PUPA ALVEARIA. *Pup. testâ subcylindricâ, angustâ, griseo-rosescenti, vel purpureo inter costas, versùs apicem attenuatâ, acuminatâ, costis crassiùsculis numerosis; aperturâ brevi, subrotundâ, labio interno acutè et minutè uniplicato.*

THE BEEHIVE PUPA. Shell cylindrical, narrow, greyish-pink or purple between the ribs, attenuated towards the apex, acuminated, with rather thick, numerous ribs, aperture short, rather round, inner lip with a sharp, small plait.

DILWYN (Turbo). Pfeiffer II. 315.
Bulimus fusus, Bruguière.
Pupa fusus, Lamarck.
Pupa rubicunda, Mentse.
Hab. Bahamas.

Species 24. (Mus. Brit. and Sowerby.)

PUPA WEINLANDI. *Pup. testâ elevatâ, cylindricâ, tenuiter liratâ, pallidè rubescenti, fusco strigatâ; apice attenuato, anfractu ultimo obliquè breviter rimato; aperturâ magnâ, intùs fuscâ, labio interno vix plicato.*

WEINLAND'S PUPA. Shell elevated, cylindrical, finely ridged, pale reddish, striped with brown, apex attenuated; last whorl obliquely, shortly notched; aperture large, brown within, inner lip scarcely plaited.

KURR, MS. Pfeiffer, Mon. VI. p. 290.
Hab. Crooked Island, Bahamas.

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G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

PUPA.

PLATE IV.

Species 25. (Mus. Brit.)

PUPA SECALE. *Pup. testâ parvâ, tenui, subcylindricâ, versùs apicem attenuatâ, corneâ, vel fusco-purpurascenti, obliquè rimatâ; aperturâ subquadratâ; margine interno quinqueplicato.*

THE RYE PUPA. Shell small, thin, subcylindrical, attenuated towards the apex, horny or purplish-brown, obliquely notched; aperture rather square, inner margin five-plaited.

DRAPARNAUD. Mol. Fluv. et Ter.

Pupa juniperi, Fleming.

Helix cylindrica, Stüder.

Hab. Europe.

Species 26. (Mus. Theobald.)

PUPA FURTOIDES. *Pup. testâ parvâ, pallidâ, cylindricâ, tenuiter liratâ, suprà medium tumidiùsculâ, rimatâ, aperturâ subauriformi; labio inferno uniplicato, labio externo suprà medium sinuatim contracto.*

THE FURTIVE PUPA. Shell small, pale, cylindrical, finely ridged, rather more tumid above the middle, notched, aperture somewhat auriform; inner lip single-plaited, outer lip sinuously contracted above the middle.

THEOBALD. Journ. Asiat. Soc. Beng. 1870.

Hab. Shan Provinces.

A little like *P. Blanfordi*, but not so tapering downwards, and quite different in the plaits of the mouth.

Species 27. (Mus. Sievers.)

PUPA PHASIANUS. *Pup. testâ albâ, parvâ, brevi, lævi, latâ rimatâ, versùs apicem subattenuatâ; anfractibus quinque, ultimo magno; aperturâ subquadratâ, margine interno labiis sexplicato.*

THE PHEASANT PUPA. Shell white, small, short, smooth, broad, a little attenuated towards the apex; whorls five, the last large, notched; aperture rather square, inner margin of the lips with six plaits.

DUBOIS. Journ. de Conch. 1873.

Hab. Central Russia.

Species 28. (Mus. Gassies.)

PUPA LIFOUANA. *Pup. testâ minutâ, latâ, latè umbilicatâ, tenuissimè et regulariter striatâ, nitenti, corneâ, ultimo anfractu ad medium fusco unifasciato; suturâ minutissimè crenulatâ, anfractibus 6, superioribus brevibus, inferioribus altis; aperturâ obliquâ, quadriplicatâ, plicis parietalibus, unâ superiori maximâ, alterâ parvâ; plicis columellari et labiali parvis.*

THE LIFOU PUPA. Shell minute, broad, broadly umbilicated, very finely and regularly striated, shiny, horny, and with a brown band in the middle of the last whorl; suture very finely crenulated; whorls 6, upper ones short, lower ones high; aperture oblique, with four plaits; parietal plaits, one superior, very large, the other small; columellar and labial plaits small.

GASSIES. Fauna Caledonica, Pt. 2, p. 98. 1871.

Hab. Lifou, of the Loyalty Group.

Species 29. (Mus. Sievers.)

PUPA SIEVERSI. *Pup. testâ cylindricâ, angustâ, pallidissimè fulvâ, anfractibus 7, ultimo alto, rimato, subperforato, medianis subœqualibus; apice obtuso; aperturâ trigonâ, triplicatâ.*

SIEVERS' PUPA. Shell cylindrical, narrow, very pale fulvous, whorls 7, the last high, notched. Slightly perforated, middle ones nearly equal; apex obtuse; aperture trigonal, three-plaited.

MOUSSON. Journ. de Conchyliologie, Pl. VII. f. 6.

Hab. Alluvial sands of Asia.

Species 30. (Mus. Hanley.)

PUPA BLANFORDI. *Pup. testâ cylindricâ, albidâ, rimatâ, prope apicem ventricosâ, infrà attenuatâ, tenuiter liratâ, anfractibus* 8, *ultimo angustato; aperturâ subquadratâ, plicis parietali, columellari et labiali mediocribus.*

BLANFORD'S PUPA. Shell cylindrical, whitish, notched, ventricose near the apex, attenuated below, finely ridged, whorls 8, the last narrow; aperture rather square, parietal, columellar and labial plaits middle-sized.

GODWIN AUSTIN. Proc. Zool. 1872.

Hab. Khasi Hills.

Species 31. (Fig. *a*, *b*, Mus. Crosse.)

PUPA MARIEI. *Pup. testâ minutâ, fusco-corneâ, brevi, inflatâ, tenui; anfractibus* 4, *ultimo subumbilicato, suprà medium subcontracto; aperturâ obliquâ, margine reflexo, tenui, suprà medium sinuatim contracto, plicis parietalibus duabus, parvis.*

MARIE'S PUPA. Shell minute, brown-horny, short, inflated, thin; whorls 4, last slightly umbilicated, a little contracted above the middle; aperture oblique, margin reflected, thin, sinnously contracted above the middle, parietal plaits two, small.

CROSSE. Journ. Conch. 1871, p. 202.

Hab. Environs of Noumea.

Species 32. (Mus. Hutton.)

PUPA LAPIDARIA. *Pup. testâ parvâ, corneâ, altâ, rimatâ, cylindricâ, leviter striatâ, anfractibus* 7, *inferioribus altis, rectis, subæqualibus, apice obtuso; aperturâ subovatâ, obliquâ, anticè productâ, plicis* 4, *parietali elongato, valido, columellari et labiali superiori parvis, inferiori elongato.*

THE STONY PUPA. Shell small, horny, high, notched, cylindrical, smoothly striated, whorls 7, lower ones high, straight, nearly equal, apex obtuse; aperture rather oval, oblique, anteriorly produced, plaits 4, parietal one elongated, strong, columellar and upper labial small, lower elongated.

HUTTON. Asiatic Society of Bengal, 1870, p. 400.

Hab. Affghanistan.

Species 33. (Mus. Hanley.)

PUPA BATHYODON. *Pupa testâ minutâ, lævigatâ, fuscâ, breviùsculâ, subpyramidatâ, spirâ versùs apicem attenuatâ, anfractibus* 5; *rotundis, ultimo rimato, aperturâ obliquâ, subovatâ, margine rubro, plicis una parietali, duabus columellaribus, duabus labialibus; columellâ obliquâ.*

THE DEEP-TOOTHED PUPA. Shell minute, smooth, brown, rather short, rather pyramidal, spire attenuated towards the apex, whorls 5, rounded, last notched, aperture oblique, rather ovate, margin red, plaits one parietal, two columellar, two labial; columella oblique.

BENSON. Annals of Natural History, 1848.

Hab. Nerbudda.

Species 34. (Mus. Gassies.)

PUPA OBSTRUCTA. *Pup. testâ albidâ, minutâ, subovatâ, lævi, leviter umbilicatâ, anfractibus* 5, *convexis, ultimo inflato, alto; apice pyramidali, obtuso; aperturâ subtrigonâ, plicâ parietali, magnâ, perpendiculari, valido.*

THE OBSTRUCTED PUPA. Shell whitish, minute, subovate, smooth, slightly umbilicated, whorls 5, convex, last inflated, high; apex pyramidal, obtuse; aperture subtrigonal, parietal plait large, perpendicular, strong.

GASSIES. Fauna Caledonica, 1871, p. 97.

Hab. Environs of Noumea and Conception.

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G. B Sowerby del et lith

Vincent Brooks Day & Son Imp

PUPA.

PLATE V.

Species 35. (Mus. Hanley.)

PUPA MICROTRAGUS. *Pup. testâ brevi, post labium arcuatim rimatâ, corneâ, tenui, semipellucidâ; ultimo anfractu elevato; aperturâ albâ, intùs contractâ; labio subplanulato; dentibus suprà columellam unâ, perpendiculari, acutâ; unâ ad columellam sursum acclivi, unâ ad marginem internum labii externi latè planulatâ.*

THE DRAG-NET PUPA. Shell short, notched in a curve behind the lip, horny, thin, semi-pellucid; last whorl elevated; aperture white, contracted within; lip rather flattened; teeth, one above the columella perpendicular, acute; one on the columella sloped upwards; one on the inner margin of the outer lip, broadly flattened.

PARREYS (Bulimus). Pfr. Bl. Malak. 12, 1865.

Hab. Greece.

Species 36. (Mus. Hanley.)

PUPA TRICUSPIS. *Pup. testâ tenui, corneâ, breviter rimatâ, brevi, anfractibus sex, ultimo subelevato, aperturâ latiùsculâ, margine tenui, albo, dentibus tribus conspicuis armato.*

THE THREE-SPEAR PUPA. Shell thin, horny, shortly notched, short, whorls six, the last rather raised, aperture rather broad, margin thin, white, armed with three conspicuous teeth.

ROSSMÄSLER (Bulimus). Pfr. Mon. Heliceorum —— 1868, p. 68.

Hab. Asia Minor.

This species has been placed with *Pupa Bergerii*, as a variety, but is much shorter, with fewer whorls and a thinner peritreme.

Species 37. (Mus. Hanley.)

PUPA BERGERII. *Pup. testâ elatâ, subventricosâ, albâ vel purpureâ, breviter rimatâ, anfractibus 8, gradatim crescentibus; aperturâ albâ, auriformi, supernè acuminatâ, margine crasso, dentibus tribus crassis acutis armato.*

BERGER'S PUPA. Shell elevated, rather ventricose, white or purple, shortly notched, whorls 8, gradually increasing; aperture white, ear-shaped, pointed above, margin thick, armed with three thick and sharp teeth.

ROTHMAN (Bulimus). Pfeiffer, Monographia Heliceorum, 1868, p. 68.

Chondrus Bergerii. Mousson.

Hab. Southern Europe.

See observation on the preceding species.

Species 38. (Mus. Hanley.)

PUPA SULCATA. *Pup. testâ ventricosâ, crassiùsculâ, corneâ; spirâ obtusâ, trochiformi, anfractibus æqualiter crescentibus, obliquè liratis, suturâ profundâ; ultimo anfractu planiùsculo, transversè rimato, aperturâ obliquè producto; supernè subquadrato, margine crasso, reflexo; columellâ rectiùsculâ.*

THE GROOVED PUPA. Shell ventricose, rather thick, horny; spire obtuse, trochiform, whorls equally increasing, obliquely ridged, suture deep; last whorl rather smooth, transversely notched, aperture obliquely produced, rather square above, margin thick, reflected; columella rather straight.

BRUGUIÈRE (Bulimus). Enc. Mel.

Gibbus Gonidomus. Adams.

Hab. Mauritius.

Species 39. (Mus. Hanley.)

PUPA ELATA. *Pup. testâ subfusiformi, purpureocorneâ; spirâ elevatâ, anfractibus 7, lentè crescentibus, convexiùsculis, ultimo elato, vix rimato; aperturâ subovatâ, margine albido, crassiùsculo, subplanulato, dentibus duobus, parvis, uno suprà columellam acuto, uno ad marginem internum labii externi elevato; columellâ edentulâ.*

THE ELEVATED PUPA. Shell subfusiform, purplish-horny; spire elevated, whorls 7, slowly increasing, rather convex, the last raised, scarcely notched; aperture rather oval, margin whitish, rather thick, rather flattened, teeth two, small, one above the columella, sharp; one on the inner margin of the outer lip, elevated; columella without teeth.

SCHMIDT. —— ? MS.

Hab. Carinthia.

This species belongs to the 'Chondrus' group.

Species 40. (Mus. Hanley.)

PUPA QUADRIDENS. *Pup. testâ elatâ, subcylindricâ, purpureo-fuscâ, tenui, angustâ, sinistrâ; spirâ elevatâ, anfractibus* 8, *rectiùsculis, lentè crescentibus; aperturâ brevi, subtrigonâ; margine albo, planulato; dentibus labii externi uno, anfractûs ultimi uno, columellæ duobus.*

THE FOUR-TOOTHED PUPA. Shell raised, subcylindrical, purple-brown, thin, narrow, sinistral; spire raised, whorls 8, rather straight, slowly increasing; aperture short, rather trigonal; margin white, flattened; teeth, one on the body whorl, one on the outer lip, and two on the columella.

MÜLLER (Pupa). Pfr. (Bulimus), Mon. Hel. 1868, p. 69. Genus 'chondrula.'

Hab. Southern Europe.

Species 41. (Mus. Hanley.)

PUPA PAGODA. *Pup. testâ solidiùsculâ, viridifuscâ, castaneo-lineatâ, tenuiter liratâ, ventricosâ, latâ; spirâ trochiformi; ultimo anfractu ad suturam gibbo, tùm declivi, infrà profundè, longè et transversè rimato; aperturâ albâ, obliquè productâ, subquadrato, margine incrassato, edentulo.*

THE PAGODA PUPA. Shell rather solid, greenish-brown, with chestnut lines, finely ridged, ventricose, broad; spire trochiform; last whorl gibbous at the suture, then sloped downwards, with a deep, long, and transverse notch below; aperture white, obliquely produced, rather square, margin thickened, toothless.

FERRUSSAC (Helix), Pfr. (Pupa), Mon. Hel. 1868, p. 287.

Helix concamerata, Wood.

Pupa Idolem. Mentse.

Hab. Mauritius.

Belonging to the 'Gibbus' or 'Gonidomus' section.

Species 42. (Mus. Hanley.)

PUPA VARIABILIS. *Pup. testâ elongato-cylindricâ, purpureo-fuscâ, solidiùsculâ, spirâ elevatissimâ, anfractibus* 13, *rectiùsculis, lente crescentibus, ultimo transversè rimato; aperturâ magnâ; margine albo, subincrassato, labio externo suprà medium tumido, plicâ anfractûs ultimi minutâ, plicis columellaribus duabus, minutis, plicis internis duâbus, lamelliformibus.*

THE VARIABLE PUPA. Shell elongated-cylindrical, purple-brown, rather solid, spire much raised, whorls 13, rather straight, slowly increasing, the last transversely notched; aperture large; margin white, rather thickened, outer lip tumid above the middle, fold of the body whorl minute, columellar folds two, small, internal folds two, lamelliform.

DRAPARNAUD. Coq. Fluv. et Terr.

Helix mutabilis. Ferrussac.

Pupa multidentata. Olivier.

Hab. France, Spain, Greece.

Species 43. (Mus. Hanley.)

PUPA QUINQUEDENTATA. *Pup. testâ subfusiformi, elongatâ, grisea, fusco-variegatâ, lævigatâ; spirâ elevatissimâ, medio subinflatâ, anfractibus* 10, *convexiùsculis; ultimo obliquè rimato; aperturâ ovatâ, plicis interiùs tribus, plicâ columellari unâ, plicâ anfractûs ultimi parvâ, margine tenui.*

THE FIVE-TOOTHED PUPA. Shell rather fusiform, elongated, grey, variegated with brown, smooth; with elevated spire; a little inflated in the middle: whorls ten, rather convex; the last obliquely notched; aperture ovate, interior folds three, columellar fold one, fold on the body-whorl small; margin thin.

BORN. —— ? Pfr. Mon. Hel.

Bulimus similis. Bruguière.

Jamimia quinquelamellata. Risso.

Hab. Southern Europe.

Species 44. (Mus. Hanley.)

PUPA FRUMENTUM. *Pup. testâ parvâ, subfusiformi, fuscâ, lævigatâ; spirâ elevatâ, medio subinflatâ; anfractibus* 11, *lentè crescentibus; ultimo longè rimato; aperturâ latiùsculâ, columellâ profundâ, latissimâ, intùs bidentatâ; dente anfractûs ultimi parvo, plicis internis quatuor, lamelliformibus, ad dorsum apparentibus.*

THE CORN PUPA. Shell small, rather fusiform, brown, smooth; spire elevated, a little inflated in the middle; whorls 11, slowly increasing; the last with a long notch; aperture rather broad, columella deep, very broad, with two interior teeth; tooth of the body whorl small, internal folds four, lamelliform.

DRAPARNAUD. Coq. Fluv. et Ter.

Pupa curta. Potiez et Michaud.

Hab. Southern Europe.

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G.B. Sowerby del et Lith.

Vincent Brooks Day & Son Imp.

PUPA.

PLATE VI.

Species 45. (Mus. Hanley.)

PUPA SEPTEMDENTATA. *Pup. testâ brevi, ventricosâ, albâ, lævigatâ; spirâ brevissimâ, anfractibus* 4, *rapidè crescentibus, angustis, convexiùsculis; ultimo rectiùsculo, elato, post labium interpum obliquè breviter rimato; aperturâ brevi, subovatâ, margine interno septemdentato, margine externo acuto.*

THE SEVEN-TOOTHED PUPA. Shell short, ventricose, white, smooth; spire very short, whorls 4, quickly increased, narrow, rather convex; the last rather straight, elevated, with a short oblique notch behind the inner lip; aperture short, rather ovate; inner margin seven-toothed, outer margin sharp.

ROTHMAN. ——? Pfr. (Bulimus). Mon. Hel. 1868, p. 70.

Hab. Syria.

Belonging to the 'Chondrus' group of species.

Species 46. (Mus. Hanley.)

PUPA GULARIS. *Pup. testâ parvâ, fuscâ, lævigatâ, cylindricâ; spirâ obtusâ, elongatâ, anfractibus* 7, *medianis vix crescentibus; ultimo profundè rimato, aperturâ brevi, angustatâ, labio externo intùs incrassato, columellâ uniplicatâ, anfractu ultimo suprà columellam plicâ elongatâ munito.*

THE THROAT PUPA. Shell small, brown, smooth, cylindrical; spire obtuse, elongated, whorls 7, middle ones scarcely increasing; last deeply notched; aperture short, narrow, outer lip thickened within, columella with one plait; last whorl provided with one plait above the columella.

ROSSMÄSLER. Pfr. Mon. Hel. 1868, vol. 6, p. 305.

Hab. Transylvania, &c.

Species 47. (Mus. Hanley.)

PUPA TRIDENS. *Pup. testâ subovatâ, pallidissimè rubescenti, spirâ elevatâ, anfractibus* 6, *superiùribus* 5 *angustis, subinflatis, ultimo elevato, breviter rimato; aperturâ subovatâ, margine reflexo, subplanulato, intùs tridentato.*

THE THREE-TOOTHED PUPA. Shell subovate; very pale reddish, spire raised, whorls 6, upper 5 narrow, rather inflated, last raised, with a short notch; aperture rather oval, margin reflected, rather flattened, three-toothed within.

MÜLLER (Helix), Pfr. (Bulimus). Mon. Hel. 1868, vol. 6. p. 69.

Hab. Central Europe.

Belongs to the 'Chondrus' group.

Species 48. (Mus. Hanley.)

PUPA PALANGA. *Pup. testâ elongato-cylindricâ, epidermide corneo indutâ, solidâ, regulariter obliquè liratâ; spirâ elevatâ, obtusissima; anfractibus* 7, *medianis lentè crescentibus, ultimo elongato, breviter rimato; aperturâ subquadratâ; peritremate continuo, margine rotundo, super anfractum ultimum uniplicato.*

THE CLUB PUPA. Shell elongated, cylindrical, covered with horny epidermis, solid, regularly obliquely ridged; spire elevated, very obtuse; whorls 7, the middle ones slowly increasing, last elongated, shortly notched; aperture rather square; peritreme continuous, margin rounded with a single tooth upon the last whorl.

LESSON. — ? Pfr. Mon. Hel. 1868, vol. 6. p. 293.

Pupa fusus, Potiez et Mich.

Hab. Isle of France.

Species 49. (Mus. Hanley.)

PUPA QUINQUEDENTATA. *Pup. testâ pallidè fulvâ, subovatâ, lævigatâ; spirâ elevatâ, pupæformi, inflatâ; anfractibus* 7, *lentè crescentibus, ultimo longè rimato; aperturâ subtrigonâ, margine albo, continuo, crasso, reflexo, ad suturam calloso; plicis dentiformibus quinque munito.*

THE FIVE-TOOTHED PUPA. Shell pale fulvous, subovate, smooth; spire elevated, pupa-shaped, inflated; whorls 7, slowly increasing, the last with a long notch: aperture subtrigonal, margin white, continuous, thick, reflected, callous at the suture, provided with five tooth-shaped plaits.

MUHLFELDT.—Pfr. Mon. Hel. 1868, vol. 6. (Bulimus), p. 68.

Pupa quinqueplicata. Potiez et Michaud.
Hab. Dalmatia.

A species of the 'Chondrus' or 'Chondrula' group, resembling *Pupa tricuspis*, but having a second small plait on the body whorl, and the same on the columella, making, with the large one on the outer lip, five tooth-like projections.

Species 50. (Mus. Hanley.)

PUPA SPRETA. *Pup. testâ ovato-acuminatâ, pallidè fulvâ, tenuiter striatâ; spirâ elevatâ, anfractibus* 6, *convexiùsculis, tribus apicalibus rapidè crescentibus, medianis subœqualibus, ultimo alto breviter rimato; aperturâ breviùsculâ, subauriformi, margine albo, crasso, reflexo, lato, subplanulato, intùs tridentato.*

THE SLIGHTED PUPA. Shell ovati-acuminated, pale fulvous, finely striated; spire elevated, whorls 6, rather convex, the three of the apex quickly enlarging, the middle nearly equal, the last high, with a short notch; aperture rather short; rather auriform, margin white, thick, reflected, broad, rather flattened, three-toothed within.

REEVE (Bulimus spretus). Conch. Icon. Monog. Bulimus.

It was not observed, till after figuring this shell, that it had been admitted among the Bulimi. It belongs to the 'Chondrus' group.

Species 51. (Mus. Hanley.)

PUPA NEWTONI. *Pup. testâ obliquè elongato-ovatâ, obliquè costatâ, pallidè luteâ; spirâ subtrochiformi, suturâ profundâ, anfractibus* 6, *convexiùsculis, ultimo profundè rimato, anticè ascendenti; aperturâ obliquè oblongâ, margine breviter expanso, tenuiter rotundo, per callum super anfractum ultimum continuo, columellâ obliquâ.*

NEWTON'S PUPA. Shell obliquely elongated ovate, obliquely ribbed, pale yellowish; spire rather trochiform, with a deep suture; whorls 6, rather convex, the last with a deep notch, anteriorly ascending; aperture obliquely oblong, margin shortly expanded, thinly rounded, continued by a callus on the last whorl, columella oblique.

H. ADAMS (Gibbus). Proc. Zool. Soc. 1867, p. 305.
Hab. Stag's Cave in the Mauritius.

Thinner, narrower, and more finely sculptured than *Pupa sulcata.*

Species 52. (Mus. Hanley.)

PUPA DEALBATA. *Pup. testâ oblongâ, obtusissimè cylindricâ, albâ, tenuissimè striatâ; spirâ truncatâ, anfractibus* 5, *superioribus inflatis; ultimo profundè rimato, subangustato; aperturâ subquadratâ, latâ, anticè rotunda, posticè subtruncatâ.*

THE WHITENED PUPA. Shell oblong, very obtusely cylindrical, white, very finely striated; spire truncated, whorls 5, the upper ones inflated, last with a deep notch, rather narrow; aperture subquadrate, broad, anteriorly rounded, posterior rather truncated.

WEBBS. Pfr. Mon. Hel. 1868, vol. 6, p. 287.
Hab. Canary Islands.

Differing from 'P. modiolus' (Sp. 54) in the enlargement of the upper whorls.

Species 53. (Mus. Hanley.)

PUPA SEDUCTILIS. *Pup. testâ sinistrorsâ pallidè, fulvâ, cylindricâ, lœvi, spirâ elevatâ, anfractibus* 8, *medianis lentè crescentibus subœqualibus, ultimo indistinctè rimato; aperturâ brevi, margine crasso, intùs validè tridentatâ.*

THE SEDUCTIVE PUPA. Shell pale fulvous, cylindrical, smooth, spire elevated, whorls 8, middle ones slowly increasing, nearly equal, last with an indistinct notch; aperture short, margin thick, strong, with three strong teeth within.

ZEIGLER.—Pfr. Mon. Hel. (Bulimus), 1868, vol. 6 (Bulimus), p. 69.
Bulimus Niso, Pfeiffer. Olim.
Hab. Central Europe.

Of the 'Chondrus' group.

Species 54. (Mus. Hanley.)

PUPA MODIOLUS. *Pup. testâ breviter cylindricâ, albidâ, tenuiter obliquè striatâ, spirâ versùs apicem paulo attenuatâ, anfractibus* 6, *apicalibus obtusis, ultimo profundè rimato; aperturâ anticè ascendenti subquadratâ, margine albo, subexpanso, lœvi.*

THE BUCKEL PUPA. Shell shortly cylindrical, whitish, finely obliquely striated, spire a little tapering towards the apex, whorls 6, apical ones obtuse, the last deeply notched; aperture raised in front, rather square, margin white, rather expanded, smooth.

FERUSSAC.—Pfr. Mon. Hel. 1868, vol. 6, p. 293.
Hab. Isle of France (Bourbon).

Of the 'Gibbus' group, much shorter than 'Pupa palanga.'

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PUPA.

PLATE VII.

Species 55. (Mus. Hanley.)

PUPA DOLIUM. *Pup. testâ corneâ, tenuiter obliquè striatâ, cylindricâ, elatâ; anfractibus decem, depressis, medianis subœqualibus, superioribus subito contractis, ultimo longè rimato, spirâ obtusâ; aperturâ super ultimum anfractum elevatâ, margine albo; columellâ biplicatâ, ultimo anfractu prope labium externum uniplicato.*

THE TUN PUPA. Shell horny, finely obliquely striated, cylindrical, raised; whorls ten, depressed, middle nearly equal, the upper ones suddenly contracted, the last with a long notch, spire obtuse, aperture raised on the last whorl, margin white; columella two-plaited, last whorl with a single plait near the outer lip.

DRAPARNAUD. Mol. Terest. et Fluv.

Hab. Spain. France. Germany.

Species 56. (Mus. Hanley.)

PUPA MUSCERDA. *Pup. testâ fusco-corneâ, lævissculâ, altâ, subcylindricâ; anfractibus quinque, ultimo profundè rimato, penultimo inflato, superioribus gradatim attenuatis, apice obtuso; aperturâ subquadratâ, plicis tribus, unâ ad medium labii interni, unâ ad medium columellæ, unâ intus aperturam locatis.*

THE MOUSE-DIRT PUPA. Shell horny-brown, rather smooth, elevated, subcylindrical; whorls five, last deeply notched, penultimate inflated, upper gradually attenuated, apex obtuse; aperture subquadrate, plaits three, one placed at the middle of the inner lip, one at the middle of the columella, and one within the aperture.

BENSON, v. Hanley's Indian Shells.

Hab. Ceylon.

Species 57. (Mus. Hanley.)

PUPA PLANGUNCULA. *Pup. testâ albâ, politâ, pellucidâ, altâ, cylindricâ; anfractibus quinque, rectilateralibus, primo obtusissimè compresso, ultimo obliquè rimato, umbilicato; suturâ profundâ; aperturâ contractâ, plicâ columellari crassâ, quasi duplicatâ, callo labii interni maximo, labio externo concinnè marginato, medio sinuatim contracto, intus triplicato, plicâ medianâ elongatâ, acutâ.*

THE PUPPET PUPA. Shell white, polished, pellucid, elevated, cylindrical; whorls five, straight-sided, the first very obtusely compressed, the last obliquely notched, umbilicated; suture deep; aperture contracted, columellar fold thick, as it were duplicated, callus of the inner lip very large, outer lip neatly bordered, sinuously contracted in the middle, with three plaits inside, the middle plait elongated, acute.

BENSON, v. Hanley's Ind. Shells.

Hab. Kumah Hills.

Species 58. (Mus. Hanley.)

PUPA SCULPTA. *Pup. testâ angustâ, attenuatâ, albidâ; anfractibus octo, apicalibus lævigatis, medianis et inferioribus concinnè et crebrè plicatis, ad suturam crenulatis; ultimo rimato, aperturâ latissculâ, plicâ suturali maximâ, plicâ columellari lamelliformi, plicâ internâ validâ.*

THE SCULPTURED PUPA. Shell narrow, attenuated, whitish; whorls eight, those at the apex smooth, middle and lower neatly and closely plaited, crenulated at the suture; the last notched; aperture rather broad, sutural plait very large, columellar plait lamelliform, inner plait strong.

BENSON, v. Hanley's Ind. Shells.

Hab.——? India.

Species 59. (Mus. Hanley.)

PUPA FILOSA. *Pup. parvâ, fusco-nigrescenti; anfractibus quatuor, tribus inflatis, rapidè crescentibus, filoso-striatis, ultimo brevissculo, breviter rimato; aperturâ auriformi, quinque-plicatâ.*

THE THREADED PUPA. Shell small, blackish brown; whorls four, three inflated, rapidly increased, with thread-like striæ, the last rather short, shortly notched; aperture ear-shaped, five-plaited.

THEOBALD, Hanley's Indian Shells.

Hab. India.

Species 60. (Mus. Hanley.)

PUPA AVANICA. *Pup. pellucidâ, parvâ, lævi, subcylindricâ; anfractibus quinque, depressiùsculis, rotundis, convexissimis; ultimo breviter rimato, adscendenti; aperturâ latiùsculâ, callo crasso, magno, bifido, parietali prope suturam anfractûs ultimi, columellâ biplicatâ; labio externo albo, lato; plicis palatalibus tribus.*

THE AVA PUPA. Shell pellucid, small, smooth, subcylindrical; whorls five, rather depressed, round, very convex; the last shortly notched, ascending; aperture rather broad, with a thick, large, divided parietal callus near the suture of the last whorl, columella with two plaits, outer lip white, broad; palatal plaits three.

BENSON. Ann. and Mag. of Nat. Hist. Dec. 1863, p. 424.

Hab. Ava. Blanford.

Species 61. (Mus. Hanley.)

PUPA MIMULA. *Pup. testâ minutâ, ventricosâ, subviridi-corneâ, tenuiter striatâ, anfractibus quatuor, convexis, apicali obtusissimo, ultimo vix adscendenti, brevissimè rimato; aperturâ subquadratâ, acutissimè quinque-dentatâ.*

THE MIMIC PUPA. Shell minute, ventricose, greenish-horn, finely striated, whorls 4, convex, the apical one very obtuse, the last scarcely raised, very shortly notched, very sharply five-toothed.

BENSON, Hanley's Indian Shells.

Hab. Ceylon.

The five tooth-like plaits, one on the body-whorl, two on the columella, and two on the outer lip, nearly meet in the middle.

Species 62. (Mus.——? Copied.)

PUPA SALEMANENSIS. *Pup. testâ minutissimâ, conicâ, costellatâ, anfractibus quinque, gradatim crescentibus, ultimo profundè rimato; aperturâ auriformi, plicis dentiformibus, duabus parietalibus, unâ medio labii externi prominenti armatâ.*

SALEMAN'S PUPA. Shell very minute, conical, finely ribbed, whorls five, gradually increasing, the last deeply notched; aperture ear-shaped, armed with tooth-like plaits, two parietal, one prominent on the outer lip.

BLANFORD (Ennea). Contributions to Ind. Mal. No. 2, 1861, p. 13, t. 2. f. 8.

Hab. India.

Species 63. (Mus. Brit.)

PUPA INDICA. *Pupâ testâ parvâ, subcylindricâ, corneâ, semipellucidâ, anfractibus quinque, læviùsculis, tribus superioribus rapidè crescentibus, rotundis, penultimo et ultimo rectiùsculis, ultimo subelongato, breviter rimato; aperturâ subquadratâ, margine crasso, reflexo, quadridentato.*

THE INDIAN PUPA. Shell small, subcylindrical, horny, semipellucid, whorls five, rather smooth, the three upper ones quickly increased, rounded, the penultimate and last rather straight, the last rather long, with a short notch; aperture rather square, with thick, reflected four-toothed margin.

PFEIFFER. Mon. Helic. IV. 679.

Hab. Barrakpore, India.

Species 64. (Mus.——? Copied.)

PUPA CYLINDRELLOIDEA. *Pup. testâ parvâ, attenuatâ, albâ, apice obtuso, medio ventricosâ, basi subcontracto; anfractibus* 10, *convexiùsculis, profundè suturatis; primis tribus lævigatis, hyalinis, ceteris confertim costulatis, ultimo infrà subcarinato, obliquè soluto, paulò descendenti; aperturâ paulò obliquâ, ovato-subrotundâ, suprà propè angulum posteriorem lamellâ obliquâ, crassissimâ, valdè coarctato, labio externo supernè prope angulum uni-dentato.*

THE CYLINDRELLA-SHAPED PUPA. Shell small, attenuated, white, apex obtuse, middle ventricose, rather contracted at the base; whorls ten, rather convex, with a deep suture; the three first smooth, glassy, the rest closely ribbed, the last slightly keeled below, obliquely separated, a little descending; aperture a little oblique, ovate-rounded, with an oblique, very thick, strongly curved lamina above, near the posterior angle, outer lip with a single tooth on the outer lip above near the angle.

STOLICZKA. Journ. As. Soc. Bengal. Vol. XL. Pt. II. 1871.

Hab. Moulmein, India.

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W.G. Sowerby del. et Lith.

Vincent Brooks Day Son Imp.

PUPA.

PLATE VIII.

Species 65. (Mus. Hanley.)

PUPA KOKIELII. *Pup. testâ albidâ, semipellucidâ, lævi, pyramidatâ, brevi; anfractibus septem, rotundis, brevibus, primo obtusè depresso, ultimo ventricoso, profundè rimato et umbilicato; aperturâ valdè adscendenti, parvâ, plicis dentiformibus super anfractum ultimum duabus, ad columellam unâ, ad marginem internum labii externi tribus majoribus, ceteris intermediis parvis.*

KOKIEL'S PUPA. Shell white, semipellucid, smooth, pyramidal, short; whorls seven, rounded, short, the first obtusely depressed; last ventricose, deeply notched and umbilicated, aperture strongly ascending, small, with two tooth-like plaits on the body whorl, one at the columella, three larger on the inner edge of the outer lip, and others small, intermediate.

ROSMÄSLER. Pfeiffer. Mon. Hel. II. 353.

Helix Moricandi, Fer.

Hab. Dalmatia.

A curious little shell, with the aperture turned up towards the suture of the last whorl.

Species 66. (Mus. Hanley.)

PUPA PROCERA. *Pup. testâ parvâ, cylindricâ, fuscâ, læviusculâ; apice obtuso, anfractibus sex, subrotundis, medianis subæqualibus, rectilateralibus, ultimo rimato; aperturâ, parvâ, subquadratâ, plicis dentiformibus, unâ columellari, unâ super anfractum ultimum productâ, bifidâ.*

THE PROMINENT PUPA. Shell small, cylindrical, brown, rather smooth; apex obtuse, whorls six, rather rounded, the middle ones rather equal, straight-sided, the last notched; aperture small, rather square, tooth-like plaits, one columellar, one on the last whorl produced, double-pointed.

GOULD. Boiten. Journ. IV. 3, p. 359.

Pupa rupicola von Pfr.

Pupa carinata, Gould.

Hab. Baltimore, U. S.

Species 67. (Mus. Hanley.)

PUPA CONTRACTA. *Pup. pârvâ, albâ, pellucidâ, brevi, pyramidali; anfractibus quinque, gradatim crescentibus, rotundis, ultimo longè rimato, aperturâ subtrigonâ, parvâ, plicis, unâ super anfractum ultimum prope suturam maximâ, laminari, tribus internis laminatis.*

THE CONTRACTED PUPA. Shell small, white, pellucid, short, pyramidal; whorls five, gradually increased, rounded, the last with a long notch, aperture subtrigonal, small plaits, one on the last whorl near the suture, very large, laminar, three internal, laminar.

GULMAN. Pfeiffer, Mon. Hel.

Hab. Vermont.

Species 68. (Mus. Hanley.)

PUPA MUHLFELDTI. *Pupâ fusco-nigricanti, pyramidatâ, tenuiùsculâ, apice obtuso; anfractibus sex rotundis, gradatim crescentibus, obliquè tenuiter liratis, ultimo compresso-ventricoso, profundè rimato; aperturâ subtrigonâ, adscendenti, plicis super anfractum ultimum unâ conspicuâ, duabus columellaribus, duabus intus marginem externum elongatis.*

MUHLFELDT'S PUPA. Shell blackish brown, pyramidal, rather thin, apex obtuse; whorls six, rounded, gradually increasing, obliquely finely ridged; the last compressed-ventricose, deeply notched; aperture subtrigonal, raised, one conspicuous plait on the last whorl, two on the columella, three lengthened within the outer lip.

KÜSTER. Pfeiffer, Mon. Hel.

Pupa quinque-plicata } Muhlfeldt.
Pupa obscura }

Hab. Dalmatia.

Species 69. (Mus. Hanley.)

PUPA PHILIPPII. *Pup. testâ parvâ, fuscâ, elongatâ, cylindricâ, versus apicem attenuatâ, tenuissimè striatâ; anfractibus quinque moderatè convexis;*

aperturâ ovatâ, angustâ, plicis parietalibus super anfractum ultimum duabus, plicâ palatiali infra medium ad labii externi marginem externum extensâ.

PHILIPPI'S PUPA. Shell small, brown, elongated, cylindrical, attenuated towards the apex, very finely striated; whorls five, moderately convex; aperture ovate, narrow, with two parietal plaits upon the body whorl, a palatial plait below the middle extended to the outer margin of the lip.

CANTRAINE. Pfeiffer, Mon. Hel. II. 350.

Pupa exigua (var.) Mousson.

Hab. Italy—Dalmatia—Isl. Corfu.

Species 70. (Mus. Hanley.)

PUPA AVENACEA. *Pup. testâ elatâ, fuscâ, attenuatâ, anfractibus sex, moderatè convexis; aperturâ ovatâ, callo suturali valido, plicis super ultimum anfractum unâ, ad columellam duabus, intus marginem internum labii externi tribus lamelliformibus aperturam intrantibus.*

THE WHEAT PUPA. Shell raised, brown, attenuated; whorls six, moderately convex; aperture ovate, sutural callus strong, plates on the last whorl one, two on the columella, three within the inner margin of the outer lip, lamelliform, entering the mouth.

BRUGUIÈRE. Pfeiffer, Mon. Hel. II. 347.

Pupa avena, Draparnaud.

Pupa hordeum, Ferrussac.

Hab. Germany, Austria, Spain, France, &c.

Species 71. (Mus. ——? Copied.)

PUPA METABLITA. *Pup. testâ breviùsculâ, tenuiter costellatâ, pallidè fulvâ, cylindricâ, spirâ obtusâ, anfractibus sex, ultimo profundè rimato; aperturâ edentulâ, vix obliquâ, ovato-pyriformi; columellâ subobliquâ, labio externo vix reflexo.*

THE BLUNT-POINTED PUPA. Shell rather short, finely ribbed, pale fulvous, cylindrical, spire obtuse, whorls six, the last deeply notched; aperture without teeth, scarcely oblique, ovate-pyriform; columella rather oblique; outer lip scarcely reflected.

CROSS (Gonospira), Journal de Conchyliologie, 1874, p. 224. Pl. VIII. f. 5.

Gonospira Dupontiana. Crosse (olim).

Hab. Isl. Rodriguez.

Shorter and more ventricose than P. modiolus, with larger aperture and a slight obliquity.

Species 72. (Mus.——? Copied.)

PUPA RODRIGUEZENSIS. *Pup. testâ profundè rimatâ; albâ, subcylindricâ, tenui, translucidâ, tenuiter striatâ, apice conico; anfractibus quinque, duobus ultimis cylindricis; aperturâ subquadratâ, edentulâ; labio externo tenui.*

The RODRIGUEZ PUPA. Shell deeply notched, white, rather cylindrical, thin, translucid, finely striated; apex conical; whorls five, the two last cylindrical; aperture rather square, toothless, outer lip thin.

CROSSE. Journ. de Conch. 1874, p. 224, Pl. VIII. Fig. 4.

Hab. Isl. Rodriguez.

A likeness in miniature of the preceding, but much shorter and thinner, with the mouth straighter.

Species 73. (Mus. —— ? Copied.)

PUPA CHLORIS. *Pup. testâ flavidâ, versus apicem rubescenti, brevi, cylindricâ; apice conico, obtuso; anfractibus quinque, densè costellatis; aperturâ obliquâ, subquadratâ, edentulâ.*

THE GOLDEN PUPA. Shell yellow, becoming red towards the apex, short, cylindrical; apex conical, obtuse; whorls five, closely ribbed; aperture oblique, rather square, without teeth.

CROSSE (Gonospira), Journ. de Conch. 1874, f. 7.

Hab. Isl. Rodriguez.

Shorter and more solidly ribbed than the two preceding, with the aperture more oblique.

Species 74. (Mus. —— ? Copied.)

PUPA SINUATA. *Pup. minutissimâ fulvo-corneâ, lævi, brevi, ventricosâ; anfractibus quatuor, rotundis, apicalibus duobus rapidè crescentibus, ultimis duobus inflatis, ultimo rimato; aperturâ subquadratâ, dentibus sex contractâ et sinuatâ.*

THE SINUATED PUPA. Shell very minutely fulvous-horny, smooth, short, ventricose; whorls four, rounded, the two apical quickly enlarged, the last two inflated, the last with a notch; aperture rather square, contracted and sinuated with six teeth.

MOUSSON (Vertigo), Crosse, Journ. de Conch. Pl. VIII. Fig. 10.

Hab. Araxis.

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Sowerby del et Lith

Vincent Brooks Day & Son Lith

PUPA.

PLATE IX.

Species 75. (Mus. Hanley.)

PUPA RUPICOLA. *Pup. testâ parvâ, albidâ, elatâ, semi-pellucidâ, lævi; anfractibus quinque, rotundis, versus apicem attenuatis, suturâ profundâ separatis, ultimo vix rimato; aperturâ subtrigonâ, plicis quatuor, unâ super anfractum ultimum, unâ columellari, duabus internis ad labium externum terminantibus.*

THE STONE-DWELLING PUPA. Shell small, whitish, raised, semi-pellucid, smooth; whorls five, rounded, attenuated towards the apex, separated towards the apex; the last scarcely notched; aperture rather trigonal, plaits four, one on the body whorl, one columellar, two internal, terminating at the outer lip.

SAY. Pffr. Mon. Hel. II. 358.

Pupa carinata, Gould.

Pupa rupicola, Gould.

Hab. Florida, Baltimore, U.S.

Species 76. (Mus. Hanley.)

PUPA SIMPLEX. *Pup. testâ parvâ, breviùsculâ, obtusâ, fuscâ, apice obtuso; anfractibus sex, tenuiter striatis; ultimo infrà paulo contracto, profundè rimato; aperturâ subtrigonâ, callo suturali magno, lamelliformi, arcuatâ, plicis columellaribus duabus elongatis, unâ super anfractum ultimum internâ, duabus palatialibus elongatis; labio externo supra medium sinuatim incrassato.*

THE SIMPLE PUPA. Shell small, rather short, obtuse, brown, apex obtuse; whorls six, finely striated, a little contracted below, deeply notched; aperture rather trigonal, sutural callus large, lamelliform, arched, two columellar plaits elongated, one on last whorl internal; two palatial, elongated; outer lip sinuously thickened.

GOULD (Vertigo), Pffr. Mon. Hel. II. 302.

Hab. Massachusetts.

Species 77. (Mus. Sowb.)

PUPA MUSCORUM. *Pup. testâ parvâ, cylindricâ, brevi, lævigatâ; apice obtusissimo, anfractibus 6, rotundis, suturâ profundâ separatis, ad apicem rapidè crescentibus, ceteris subæqualibus, ultimo breviter rimato; aperturâ paulo adscendenti, dentato-plicatâ vel edentulâ, labio externo, ad marginem tenui, post marginem incrassato, extùs albo.*

THE FLY'S PUPA. Shell small, cylindrical, short, smooth; apex very obtuse, whorls 6, rounded, separated by a deep suture, rapidly increasing at the apex, others nearly equal, last shortly notched; aperture a little raised, with tooth-like plaits or without teeth; outer lip thin at the margin, thickened and white behind the margin outside.

LINNÆUS.

Pupa marginata, Draparnaud.

Pupa unidentata and *bidentata*, Pffr.

Pupa Badia, Adams.

Hab. Germany, Spain, Great Britain.

Species 78. (Mus. Sowb.)

PUPA CALLIFERA. *Pup. testâ brevi, pyramidatâ, obliquè costatâ, obtusâ; anfractibus quinque, tribus apicalibus rapidè crescentibus, ultimo profundè rimato; aperturâ oblongiùsculâ, infrà rotundâ; suprà subquadratâ, callo suturali super anfractum ultimum conspicuo; margine aperturæ subexpanso, reflexo.*

THE CALLUS-BEARING PUPA. Shell short, pyramidal, obliquely ribbed, obtuse; whorls five, three apical, rapidly increasing, last deeply notched; aperture rather oblong, rounded below, rather square above, with a conspicuous sutural callus upon the last whorl; margin of the aperture somewhat expanded, reflected.

MORELET, Sev. Conch. ii. 1860.

Hab. Mauritius.

Species 79. (Mus. Sowb.)

PUPA VERSIPELLIS. *Pup. testâ oblongâ cylindraceâ, albâ, obliquè costellatâ; apice obtusissimo; anfractibus 6, tribus primis rotundis rapidè crescentibus, tribus ceteris subæqualibus, convexiùsculis, ultimo paulo*

majori, profundè umbilico-rimato; aperturâ subrotundâ, callo prope suturam inconspicuo; margine expanso, reflexo, ferè integro.

THE CHANGEABLE PUPA. Shell oblong, cylindrical, white, obliquely costellated; apex very obtuse, whorls six, three first rounded, rapidly increased, the three others with a deeply notched umbilicus; aperture rather rounded, with an inconspicuous callus near the suture; margin expanded, reflected, almost entire.

FERRUSSAC (Versipolis), Pfr. Mon. Hel. II. 319.

Hab. Isle of Bourbon.

Species 80. (Mus. Sowb.)

PUPA BACILLUS. *Pup. testâ cylindrico-subpyramidali, supernè rubrâ, infrà flavidâ; anfractibus sex, obliquè, tenuiter costatis, superioribus paulò attenuatis; ultimo brevi, profundè rimato; aperturâ adscendenti obliquâ, margine reflexo, subexpanso, callo suturali prope suturam valido.*

THE STAFF PUPA. Shell cylindrical-subpyramidal, red above, yellowish below; whorls six, obliquely finely ribbed, the upper a little attenuated, the last short, deeply notched; aperture raised, oblique, margin reflected, slightly expanded, sutural callus near the suture strong.

PFEIFFER. Mon. Hel. IV. 661.

Hab. Mauritius.

Species 81. (Mus. Sowb.)

PUPA LYONETTI. *Pup. testâ latè pyramidatâ, flavidâ, costellatâ; apice obtuso, anfractibus superioribus quinque gradatim crescentibus, rectiùsculis; ultimo lateraliter expanso, latere sinistrò gibboso, infrà rimâ elongatâ duplicato; aperturâ obliquè auriformi, validè adscendenti, margine incrassato reflexo.*

LYONETT'S PUPA. Shell broadly pyramidal, yellowish, ribbed; apex obtuse, five upper whorls gradually increasing, rather straight, the last laterally expanded, gibbous at the left side, doubled below, with a long slit; aperture obliquely auriform, much raised; margin thickened, reflected.

MONTFORT (Lyonetii).

Gibbus Lyonetianus, Pfeiffer.

Hab. Isl. Bourbon.

This species sometimes occurs reversed.

Species 82. (Mus. Sowb.)

PUPA CLAVATULA. *Pup. testâ tenui, costatâ, cylindricâ, supra medium inflatâ; anfractibus* 10, *costellatis, versus apicem latissimis infrà contractis, ultimo rimato; aperturâ parvâ subquadratâ, adscendenti, callo suturali magno.*

THE CLUB PUPA. Shell thin, ribbed, cylindrical, inflated above the middle; whorls ten, ribbed, very broad towards the apex, contracted below, the last notched; aperture small, rather square, ascending, sutural callus large.

LAMARCK. Anim. S. Vert.

Hab. Isl. Bourbon.

Species 83. (Mus. Sowb.)

PUPA HOLOSTOMA. *Pup. testâ tenui, costatâ, albâ, cylindricâ, supra medium paulò inflatâ; anfractibus numerosis, inferioribus subattenuatis; ultimo angusto, rimato; aperturâ parvâ, subquadratâ, callo suturali maximâ.*

THE SPIKE-MOUTHED PUPA. Shell thin, ribbed, white, cylindrical, a little inflated above the middle; whorls numerous, the lower ones partly attenuated; the last narrow, notched; aperture small, subquadrate, sutural callus very large.

MORELET. Sev. Conch. II. 1860.

Hab. Mauritius.

Narrower than the preceding, and with the upper whorls less inflated.

Species 84. (Mus. Sowb.)

PUPA DUSSUMERII. *Pup. testâ ventricosâ, albâ, epidermide corneâ subviridi; anfractibus* 6, *subdepressis, ultimo magno infrà attenuato, profundè rimato; aperturâ ovato, pyriformi; margin reflexo.*

DUSSUMER'S PUPA. Shell ventricose, white, with a greenish horny epidermis; whorls six, rather depressed, the last large, attenuated below, deeply notched; aperture ovate, pyriform; margin reflected.

REEVE. (Bulimus), Conch. Icon. Vol. V.

Hab. Mauritius.

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W. G. Sowerby del et Lith

Vincent Brooks Day Son Imp

PUPA.

PLATE X.

Species 85. (Mus. ——? Copied.)

PUPA FABREANA. *Pup. testâ minutâ, fusco-corneâ, sinistrâ, oblongo-ovatâ; spirâ obtusâ; anfractibus 5, convexis, regulariter crescentibus; ultimo vix rimato, versus aperturam validè contracto; aperturâ auriformi, ferè verticali, plicis tribus, unâ columellari, unâ parietali, unâ intus marginem labii externi productâ, labio externo ad medium contracto.*

FABRE'S PUPA. Shell minute, horn-brown, sinistral, oblong-ovate, spire obtuse; whorls five, convex, regularly increased, the last scarcely notched, strongly contracted towards the aperture, aperture auriform, almost vertical, plaits three, one columellar, one parietal, one produced within the margin of the outer lip; outer lip contracted.

CROSSE, Journ. de Conch. Vol. XX. p. 359, 1872.

Hab. New Caledonia.

Species 86. (Mus. Hanley.)

PUPA SAULCEYI. *Pup. testâ sinistrâ, lævi, pallidè fulvâ, ovato-ventricosâ; spirâ obtusè conicâ, medio subinflatâ; ultimo anfractu infrà obliquè rimato, dorso ante aperturam contracto; aperturâ subovatâ, margine albo, latè reflexo, intùs sexplicato, plicis acutis, medio approximatis; callo suturali valido, elongato.*

SAULCEY'S PUPA. Shell sinistral, smooth, pale, fulvous, ovate-ventricose; spire obtusely conical, slightly inflated in the middle; last whorl obliquely notched, the back contracted before the aperture; aperture subovate, margin white, broadly reflected, with six plaits within, acute, approaching in the middle; sutural callus strong, elongated.

BOURGAINVILLE. Pfr. Mon. IV. p. 684.

Hab. Southern Europe.

Species 87. (Mus. Hanley.)

PUPA SCAPUS. *Pup. testâ sinistrâ, elongato-cylindricâ, solidâ, pallidâ, spirâ supernè conicâ, medio cylindricâ, anfractibus 8, 9, superioribus rotundis, rapidè crescentibus, medianis subæqualibus, ultimo vix rimato; aperturâ parvâ, subovatâ, labio interno supra medium uniplicato.*

THE STALK PUPA. Shell sinistral, elongated, cylindrical, solid, pale, whorls 8 or 9, the upper ones rounded, rapidly increased, the middle ones rather equal, the last with a very slight notch; aperture small, rather ovate, inner lip with a single plait above the middle.

PARREY'S. Pfeiffer (Chondrula), Mon. VI.

Pupa Raymondi, Bourgainville.

Bulimus bicallosus ? Triv.

Hab. Asia Minor.

Species 88. (Mus. ——? Copied.)

PUPA PAITENSIS. *Pup. testâ minutâ, sinistrali, subviridi-fuscâ, brevi, tenui, breviter cylindricâ; anfractibus quatuor gradatim crescentibus, spirâ obtusâ; aperturâ subovatâ, columellâ reflexâ, labio interno uniplicato.*

PAITIAN PUPA. Shell minute, sinistral, greenish brown, short, thin, shortly cylindrical; whorls 4, gradually increased, last deeply notched, spire obtuse, aperture subovate, columella reflected, inner lip single-plaited.

CROSSE. Journ. de Conch. 1874, p. 391., Pl. 12, Fig. 5.

Hab. Paiti, Peru.

Species 89. (Mus. Sievers.)

PUPA SIGNATA. *Pup. testâ parvâ, albâ, perforatâ, cylindraceâ, lævigatâ, supra medium inflatâ, infrà subattenuatâ; apice obtuso; anfractibus septem, medianis rectiùsculis, ultimo ad basim obscurissimè cristato, impressione signato, aperturâ parvâ, margine crasso, rotundo, labio interno horizontali, medio acutè uniplicato.*

THE MARKED PUPA. Shell small, white, perforated, cylindrical, smooth, inflated above the middle, rather attenuated below, whorls 7, middle ones rather straight, the last very obscurely crested and marked with an impression; aperture small, margin thick, inner lip horizontal, with a sharp tooth in the middle.

MOUSSON. Journ. de Conch. 1873, p. 211. Pl. VIII. Fig. 7.
Hab. Araxis.

Species 90. (Mus. Sievers.)

PUPA BIFILARIS. *Pup. testâ parvâ, fuscâ, cylindricâ, lævigatâ, apice obtuso; anfractibus septem, medianis rectiùsculis, ultimo arctè rimato; aperturâ latâ, margine latè reflexo, columellâ latâ, bifilosâ, labio interno prope medium uniplicato.*

THE DOUBLE-THREADED PUPA. Shell small, brown, cylindrical, smooth, apex obtuse; whorls 7, middle rather straight, the last with a curved notch; aperture broad, with broadly reflected margin, columella broad, two-threaded, inner lip with a single plait near the middle.

MOUSSON. Journ. de Conch. 1873, p. 210. Pl. VIII. Fig. 8.
Hab. Gorkischa.

Species 91. (Mus. Crosse.)

PUPA DESMAZURESI. *Pup. testâ parvâ, fulvâ, breviter, cylindricâ; apice obtusissimo; anfractibus septem, convexiùsculis, ultimo profundè rimato, aperturâ subauriformi, internè uniplicatâ; labio interno acutè uniplicato, columellâ acutè uniplicatâ; labio externo tenui.*

DESMAZURES'S PUPA. Shell small, fulvous, shortly cylindrical, apex very obtuse; whorls seven, rather convex; the last deeply notched; aperture rather auriform, with one interior plait, inner lip with one sharp plait, columella with one sharp plait; outer lip thin.

CROSSE. Journ. de Conch, 1874, p. 227, Pl. VIII. f. 3.
Hab. Isl. Rodriguez.

Species 92. (Mus. Hanley.)

PUPA POLYODON. *Pup. testâ fulvâ, cylindrico-fusiformi, tenuiter liratâ, altâ, angustâ, anfractibus novem, convexiùsculis, medianis subæqualibus, suturâ profundâ separatis; ultimo profundè rimato; aperturâ parvâ, ovatâ, plicis numerosis intrantibus inæqualibus contractâ.*

THE MANY-TOOTHED PUPINA. Shell fulvous, cylindrically fusiform, finely ridged, raised, narrow, whorls nine, rather convex, the middle ones nearly equal, separated by a deep suture; the last deeply notched; aperture small, oval, contracted by numerous entering unequal plaits.

DRAPARNAUD. Moll. Ter. et Fluv.
Pupa ringicula, Michaud.
Hab. Southern Europe.

Species 93. (Mus. Hanley.)

PUPA NUCIFRAGA. *Pup. testâ subovatâ, pallidè fulvâ, brevi, tenuiter striatâ; apice obtuso; anfractibus quinque, superioribus quatuor, brevibus, rapidè crescentibus, convexis, ultimo alto, rectiùsculo, latè et profundè rimato; aperturâ ad suturam elevatâ, callosâ, plicis tribus magnis et duabus minoribus contractâ, margine propè suturam sinuato.*

THE NUTCRACKER PUPA. Shell rather oval, pale fulvous, short, finely striated; apex obtuse; whorls five, the four upper ones short, rapidly increasing, convex, the last elevated, rather straight, with a broad and deep notch; aperture raised at the suture, with a small sutural callus, contracted by three large and three smaller plaits, and a sinus near the suture.

PARREY'S. Pfr. Mon. Hel. Bulimus (Chondrula), Vol. VI. p. 22.
Hab. Isl. Cyprus.

Species 94. (Mus. —— ? Copied)

PUPA LIENARDIANA. *Pup. testâ parvâ, fusco-corneâ, elatâ, subcylindricâ, lævigatâ; anfractibus duobus parvis apicalibus, tum tribus altis inflato-cylindraceis; ultimâ profundè rimato; aperturâ obliquâ oblongo-subquadratâ; dentibus unâ parietali, unâ columellari, productis acutis duobus marginalibus infra medium labii externi locatis.*

LIENARD'S PUPA. Shell small, horny brown, elevated, subcylindrical, smooth; whorls two, small apical, then three elevated, inflated, cylindrical; the last with a deep notch; aperture oblique, oblong-subquadrate, with one parietal and one columellar tooth, produced, sharp, two marginal, placed below the middle of the outer lip.

CROSSE. Journ. de Conch. 1874, p. 228, Pl. VIII. f. 4.
Hab. Coral Point, Isl. Rodriguez.

This is said to bear some resemblance to a little shell named *caryelium mauritianum* by Mr. H. Adams.

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

PUPA.

PLATE XI.

Species 95. (Mus. —— ?)

PUPA CASPIA. *Pup. testâ minutâ, fuscâ, lævi, breviter cylindricâ, apice obtusissimo; anfractibus* 5, *convexiùsculis, ultimo arcuatim rimato; aperturâ majùsculâ, subquadratâ, pliçâ parietali acutâ, margine externo tenui, columellâ obliquâ.*

THE CASPIAN PUPA. Shell minute, brown, smooth, shortly cylindrical, apex very obtuse; whorls five, rather convex, the last with an arched notch; aperture rather large, rather square, parietal plait sharp, outer margin thin, columella oblique.

PFEIFFER. Malak. Bl. 1871. Vol. XVIII.

Hab. Lenkoran, Transcaucasia.

Species 96. (Mus. —— ?)

PUPA LONGURIO. *Pup. testâ minutâ, fuscatâ, lævigatâ, elongatâ, angustâ, subcylindrico-pyramidatâ; apice obtuso; anfractibus quinque, convexiùsculis, ultimo cylindraceo, elongatâ, arcuatim rimato; aperturâ subquadratâ, margine lutescenti, expanso, reflexo; plicis parietali et columellari prominentibus, acutis, plicis internis tribus.*

THE POLE PUPA. Shell minute, brown, smooth, elongated, narrow; whorls five, rather convex, last cylindrical-pyramidal; apex obtuse; whorls five, rather convex, the last cylindrical, elongated, with a curved slit; aperture rather tending to square, margin yellowish, expanded, reflected; a prominent sharp parietal, and a columellar plait; internal plaits three.

CROSSE. Journ. de Conch, 1873. Pl. I. f. 2.

Hab. Curaçao, Antilles.

Species 97. (Mus. Hanley.)

PUPA ARIGONIS. *Pup. testâ angustâ, purpureo-fuscâ, subfusiformi; anfractibus* 8, *gradatim crescentibus; ultimo profundè rimato; aperturâ parvâ, fulvâ, elevatâ, angustè ovatâ, intùs biplicatâ, callo suturali albo, conspicuo, plicâ parietali intranti, columellâ latâ, elevatâ, uniplicatâ, labio externo crassiùsculo.*

THE ARIGO PUPA. Shell narrow, purple-brown, subfusiform; whorls 8, gradually increased, the last deeply notched; aperture small, fulvous, raised, narrowly ovate, with two interior plaits, sutural callus white, conspicuous, parietal plate entering, columella broad, raised, single-plaited; outer lip rather thick.

ROSSMÄSLER. Icon. III. 17, p. 105, t. 85, f. 936.

Pupa megachilos, Albers.

Hab. Valentia.

Species 98. (Mus. Hanley.)

PUPA PAGODULA. *Pup. testâ fulvo-corneâ, inflato-cylindricâ, brevi, obliquè liratâ; apice obtuso; anfractibus septem, depressis, convexis, medianis inflatis, ultimo profundè et longè rimato, infra medium contracto; aperturâ ad suturam anfractûs ultimi elevatâ, prope suturam sinuatâ, columellâ prope medium callosâ, labio externo supra medium tumidâ.*

THE LITTLE PAGODA PUPA. Shell horny-fulvous, inflated-cylindrical, short, obliquely ridged; apex obtuse; whorls seven, depressed, convex; the middle ones inflated, the last with a deep and lengthened slit, contracted below the middle; aperture raised to the suture of the last whorl, sinuated near the suture, columella callous near the middle, outer lip tumid above the middle.

DESMAREST. Pfr. Mon. Hel. II. 310.

Hab. South Europe.

Species 99. (Mus. Hanley.)

PUPA VILLÆ. *Pup. testâ cylindricâ, fuscâ, politâ, apice obtusissimo, anfractibus ad apicem rapidè crescentibus, tum tumidis, medianis rectiùsculis, altis, ultimo profundè et latè rimato; aperturâ angustâ, paulùm elevatâ, obliquâ, margine angusto, labio externo supra medium sinuato; labio interno prope suturam callo pliciformi munito, columellâ obliquâ, edentulâ.*

VILLA'S PUPA. Shell cylindrical, brown, polished, apex very obtuse, whorls rapidly increased at the

apex, then tumid, middle ones rather straight, elevated, the last deeply and broadly notched; aperture narrow, a little raised, oblique, margin narrow, outer lip sinuated above the middle, inner lip provided with a plait-like callus near the suture, columella oblique, toothless.

CHARPENTIER. Pfeiffer. Mon. Hel. II. 330.

Hab. Spain.

Species 100. (Mus. Hanley.)

PUPA STRANGEI. *Pup. testâ sinistrali, cylindricâ, tenui, semipellucidâ, corneâ, anfractibus* 4, *apicali rotundo, duobus mediânis convexiùsculis, ultimo altiùsculo, infrà profundè rimato; aperturâ subtrigonâ, margine albo, reflexo; labio interno plicis dentiformibus duabus infra medium armato, columellâ plicâ prominenti et alterâ parvâ, et labio interno plicâ parietali duplicatâ munitis.*

STRANGE'S PUPA. Shell sinistral, cylindrical, thin, semipellucid, horny, whorls 4, the apical one rounded, the two middle ones rather convex, the last rather raised, deeply notched below; aperture subtrigonal, margin white, reflected; inner lip armed with two tooth-like plaits, columella provided with a prominent plait and another small one, and the inner lip with a doubled parietal plait.

PFEIFFER. Mon. VI. 336.

Hab. Port Jackson.

Species 101. (Mus. Hanley.)

PUPA CONICA. *Pup. testâ fuscâ, subpyramidatâ, filoso-striatâ; apice acutiùsculo; anfractibus novem, depressis, versus apicem attenuatis, ultimo lato, profundè et longè rimato; aperturâ versus suturam ultimi anfractûs elevatâ, columellâ perobliquâ, intùs spiraliter biplicatâ, labio externo intùs infra medium uniplicato.*

THE CONICAL PUPA. Shell brown, rather pyramidal, with thread-like striæ; apex rather acute; whorls nine, depressed, the last broad, with a deep and long slit; aperture raised towards the suture of the last whorl, columella very oblique, with two spiral plaits, outer lip with a plait inside, below the middle.

ROSSMÄSLER. Pfeiffer, Mon. Hel. II. 325.

Hab. Styria.

Species 102. (Mus. Hanley.)

PUPA DOLIOLUM. *Pup. testâ cylindricâ, fuscâ, tenuiter liratâ, prope apicem tumidâ, infrà subattenuatâ; anfractibus septem; convexiùsculis, ultimo arcuatim rimato; aperturâ latâ, albâ; labio externo prope suturam sinuato, labio interno plicâ parietali munito.*

THE LITTLE TUN PUPA. Shell cylindrical, brown, finely ridged, tumid near the apex, a little attenuated below; whorls seven; rather convex, the last with a curved notch; aperture broad, white; outer lip sinuated near the suture, inner lip provided with a parietal plait.

BRUGUIÈRE. *Lamk.* Anim sans Vert.

Helix coronata, Stüder.

Helix spinosa, Ferrussac.

Helix critica, Zellius.

Helix villosula, Kokiel.

Hab. South Europe.

Species 103. (Mus. Hanley.)

PUPA RUPESTRIS. *Pup. testâ pyramidatâ, fusco-purpureâ; apice acuminato; anfractibus quinque, convexis, rapidè crescentibus, obliquè tenuiter liratis, ultimo majùsculo, rimato; aperturâ parvâ, margine ferè continuo, plicis nullis.*

THE ROCK PUPA. Shell pyramidal, purple-brown; apex acuminated; whorls five, convex, rapidly increased, obliquely, finely ridged; the last rather large, notched; aperture small, margin almost continuous, without plaits.

PHILIPPI. Pfeiffer II. 314.

Hab. Sicily.

Species 104. (Mus. Hanley.)

PUPA LINCOLNENSIS. *Pup. testâ sinistrali, albâ vel fuscâ, tenuiter striatâ, breviter cylindricâ, apice obtuso, ultimo anfractu infrà breviter rimato; aperturâ parvâ, margine reflexo, labio interno uniplicato.*

THE Port LINCOLN PUPA. Shell sinistral, white or brown, finely striated, shortly cylindrical, apex obtuse, last whorl with a short notch below; aperture small, margin reflected, inner lip with one fold.

COX. Proc. Geol. Soc. 1867.

Hab. Port Lincoln, S. Australia.

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

PUPA.

PLATE XII.

Species 105. (Mus. Lewis.)

PUPA GOULDII. *Pup. testâ minutâ, fusco-corneâ, lævigatâ, breviter subcylindricâ; anfractibus quatuor, tribus inflatis, rotundis, ultimo latè rimato; aperturâ subauriformi, plicis internis lamelliformibus tribus, plicâ parietali labii interni acutè productâ; plicis columellaribus duabus.*

GOULD'S PUPA. Shell minute, horny-brown, smooth, shortly sub-cylindrical; whorls four, three inflated, rounded, the last broadly notched; aperture rather auriform, with three interior lamelliform plaits, parietal plait of the inner lip sharply produced; columellar plaits two.

BINNEY. Pfeiffer. Mon. Hel. II. 358.

Hab. Arctic America.

Species 106. (Mus. Hanley.)

PUPA CORTICARIA. *Pup. testâ parvâ, albâ, pellucidâ, in partibus cortice subgranoso obtectâ, breviter cylindricâ, apice obtuso; anfractibus quatuor rotundis, ultimo rimato; aperturâ auriformi; labio interno plicâ magnâ et alterâ parvâ munito, plicâ columellari parvâ.*

THE RIND-COVERED PUPA. Shell small, white, pellucid, covered in parts by a slightly granular crust or rind, shortly cylindrical, apex obtuse; whorls four, rounded, the last notched; aperture auriform, inner lip provided with a large plait and a small one, columellar plait small.

SAY. Pfeiffer. Mon. Hel. II. 328.

Hab. Pennsylvania.

Species 107. (Mus. Hanley.)

PUPA ALPICOLA. *Pup. testâ fuscâ, cylindricâ, breviusculâ, lævi, apice obtuso, anfractibus septem, convexiusculis, ultimo infrà contracto, horizontaliter rimato; aperturâ subquadratâ, margine intùs paulo incrassato, plicis nullis.*

THE ALPINE PUPA. Shell brown, cylindrical, rather short, smooth, apex obtuse, whorls seven, rather convex, the last contracted below, with an horizontal notch; aperture rather square, margin a little thickened within, no plaits.

CHARPENTIER. Pfeiffer. Mon. Hel. II. 305.

Hab. Spain.

Species 108. (Mus. Hanley.)

PUPA ANCONOSTOMA. *Pup. testâ subviridi-fuscâ, cylindricâ, anfractibus sex brevibus, vix convexis, ultimo rimato, subumbilicato; aperturâ subtrigonâ, infrà subacuminatâ, supernè prope suturam angulatâ, margine infra angulum tumidiusculâ.*

THE ANGLE-MOUTHED PUPA. Shell greenish-brown, cylindrical, whorls six, short, very slightly convex, the last notched, rather umbilicated; aperture rather trigonal, slightly acuminated below, angular above near the suture, margin a little swelled below the angle.

LOWE. Pfeiffer II. 314.

Pupa umbilicata var. De Paiva.

Pupa Fanalensis, Lowe.

Hab. Madeira.

Species 109. (Mus. Hanley.)

PUPA CHARPENTIERI. *Pup. testâ parvâ, brevi, inflatâ, fuscâ, semipellucidâ, anfractibus quatuor, tribus rotundis, rapidè crescentibus, ultimo magno, infrà paulò contracto, profundè rimato; aperturâ subtrigonâ, labio externo prope suturam sinuato, medio et infrà intùs incrassato; plicis dentiformibus, parietali unâ, columellari duabus magnis et unâ parvâ, labii externi duabus.*

CHARPENTIER'S PUPA. Shell small, short, inflated, brown, semipellucid, whorls four, three round, rapidly increasing, the last large; a little contracted below, with a deep notch; aperture sub-

trigonal, outer lip sinuated near the suture, thickened at and below the middle, tooth-like plaits, one parietal, columellæ two large and one small, and two on the outer lip.

SHUTTLEWORTH. Pfeiffer. Mon. III. p. 555.

Pupa Moulinsiana, Dupuy.

Pupa (vertigo) ventrosa, Heynem.

Hab. Spain, France, Germany.

Species 110. (Mus. Hanley.)

PUPA PELLUCIDA. *Pup. testâ elatâ, subpyramidatâ, fuscâ, lævi, semipellucidâ, anfractibus sex, inflatis, ultimo breviter rimato; aperturâ parvâ, plicis dentiformibus tribus ad quinque, plicâ ultimi anfractûs nonnunquam ad terminum duplicatâ.*

THE PELLUCID PUPA. Shell raised, rather pyramidal, brown, smooth, semipellucid, whorls six, inflated, the last with a short notch; aperture small, tooth-like plaits three to five, the plait of the body whorl sometimes doubled at the end.

PFEIFFER. Mon. Hel. II. 360.

Pupa servilis, Gould.

Pupa Rüsei, Adams.

Hab. Cuba, Jamaica, St. Thomas, Porto Rico.

Species 111. (Mus. Hanley.)

PUPA PACHYGASTRA. *Pup. testâ elatâ, corneâ, tenuiter liratâ, subfusiformi, versus apicem acuminatâ, medio cylindrico; anfractibus decem rectiùsculis, ultimo infrà acuminato, longè et obliquè rimato, aperturâ ovatâ, adscendenti, margine albo, reflexo, subexpanso, callo suturali laminatim continuo, plicis ultimi anfractûs unâ et columellæ quatuor, lamelliformibus, labii externi quatuor, laminiformibus, intùs continuis.*

THE THICKENED PUPA. Shell raised, horny, finely ridged, rather fusiform, acuminated towards the apex, cylindrical in the middle; whorls ten, rather straight; the last acuminated below, with a long oblique notch, aperture ovate, raised, margin white, reflected, rather expanded, sutural callus continued in layers, plaits of the last whorl one, and of the columella four, lamelliform, of the outer lip four, laminiform, continued within.

ZEIGLER. Pfeiffer. Mon. Hel. II. 337.

Pupa oblongata, Rossmässler.

Pupa frumentum var? Adams.

Hab. Dalmatia.

Species 112. (Mus. Hanley.)

PUPA VARIABILIS. *Pup. testâ elatâ, corneâ, tenuiter liratâ, versus apicem acuminatâ, medio inflatâ, anfractibus decem, convexiùsculis, ultimo infrà acuminato, longè et obliquè rimato; aperturâ ovatâ, latâ, adscendenti, margine albo, reflexo, expanso; callo suturali intùs continuo, plicis laminiformibus intùs continuis, convergentibus.*

THE VARIABLE PUPA. Shell raised, horny, finely ridged, acuminated towards the apex, inflated in the middle, whorls ten, rather convex, the last acuminated below, with a long, oblique notch, aperture ovate, broad, raised, margin white, reflected, expanded; sutural callus continued within, lamelliform plaits continued within, converging.

DRAPARNAUD. Pfeiffer. Mon. Hel. II. 349.

Helix mutabilis, Ferrussac.

Pupa multidentata, Olivi.

Hab. France, Switzerland, Spain.

Species 113. (Mus. Hanley.)

PUPA LUSITANICA. *Pup. testâ subpyramidatâ, purpureo-fuscâ, versus apicem attenuatâ, obliquè liratâ, medio paulò inflatâ; anfractibus septem, convexis, ultimo majùsculo, obliquè breviter rimato; aperturâ pallidè fulvâ, labio externo paulò elevato, levitèr reflexo; columellâ profundâ biplicatâ, plicis internis tribus elongatis.*

THE LUSITANIAN PUPA. Shell rather pyramidal, purple-brown, attenuated towards the apex; obliquely ridged, a little inflated in the middle; whorls seven, convex, the last rather large, with a short oblique notch; aperture pale fulvous, outer lip a little raised, slightly reflected; columella deep, two-plaited, three internal elongated plaits.

ROSSMÄSLER. Pfeiffer. Mon. Hel. II. 347.

Hab. Lusitania.

Species 114. (Mus. Hanley.)

PUPA MODESTA. *Pup. testâ minutâ, fuscâ, brevi, inflatâ, semipellucidâ, anfractibus quatuor, rotundis; ultimo umbilicato; aperturâ parvâ, brevi, plicis dentiformibus acutis plurimis contracto.*

THE MODEST PUPA. Shell minute, brown, short, inflated, semipellucid; whorls four, rounded, the last umbilicated; aperture small, short, contracted by several sharp tooth-like plaits.

A. ADAMS. Proc. Zool. Soc.

Hab. Mauritius.

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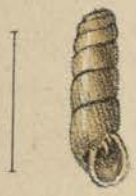

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G.B. Sowerby del et Lith

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PUPA.

PLATE XIII.

Species 115. (Mus. Hanley.)

PUPA RHODIA. *Pup. testâ angustâ, altâ, pyramidatâ, fuscâ, tenuissimè liratâ; apice obtuso; anfractibus sex, superioribus quatuor attenuatis, subrotundis, penultimo ventricoso, ultimo umbilicato; aperturâ parvâ, angustâ, anticè acuminatâ, intùs dentibus prominentibus quinque contractâ.*

THE RHODE PUPA. "Shell narrow, high, pyramidal, brown, very finely ridged; apex obtuse; whorls six, upper four attenuated, rather rounded, last but one ventricose, last umbilicated; aperture small, narrow, anteriorly acuminated, contracted within by five prominent teeth.

ROTHWELL. Pfeiffer, Monagraph V. p. 318.

Pupa acutula. Parreys.

Hab. Rhode, Dalmatia.

Species 116. (Mus. Hanley.)

PUPA UVULA. *Pup. testâ clavatâ, albidâ, costellis rectis rotundis sculptâ; apice obtuso; anfractibus superioribus ventricosis, duobus ultimis subcylindricis, paulò contractis, ultimo longè rimato; aperturâ rectâ, posticè subquadratâ, anticè productâ, rotundâ, prope suturam plicâ parietali munitâ.*

THE UVULE PUPA. Shell club-shaped, whitish, sculptured with rounded, straight little ribs; apex obtuse; upper whorls ventricose, two last rather cylindrical, a little contracted, last with a long notch; aperture straight, posteriorly rather square, anteriorly produced, rounded, provided with a parietal plait.

DESHAYES. Conchologie de l'île de la Réunion.

Hab. Isl. Bourbon.

Species 117. (Mus. Hanley.)

PUPA OVULARIS. *Pup. testâ ovatâ, brevi, ventricosâ, lævi, fusco-corneâ; apice obtuso; anfractibus quatuor, tribus superioribus brevibus, ultimo magno, breviter rimato; aperturâ albâ, semiovatâ, intùs dentibus quinque prominentibus contractâ, margine subexpanso.*

THE EGG-SHAPED PUPA. Shell ovate, short, ventricose, smooth, brownish-horny; apex obtuse; whorls four, three upper short, last large, with a short notch; aperture white, semiovate, contracted within by five prominent teeth, margin rather expanded.

OLIVIER. Pfeiffer (Bulimus), Mon. 1868, p. 7.

Hab. Syria.

Species 118. (Fig. *a*, *b*. Mus. Hanley.)

PUPA SEPTEMDENTATA. *Pup. testâ oblongo-ovatâ, fusco-purpureâ vel albidâ, lævi, altâ, apice obtusiùsculo; anfractibus sex, tribus superioribus breviùsculis, penultimo ventricoso, ultimo longè et arcuatim rimato; aperturâ ovatâ, albâ, dentibus septem lamelliformibus intùs valdè contractâ, margine latè expanso, ad dorsum contracto.*

THE SEVEN-TOOTHED PUPA. Shell oblong-ovate, purple-brown or white, smooth, high; apex rather obtuse; whorls six, three upper rather short, last ventricose, with a long curved notch; aperture ovate, white, strongly contracted within by seven lamelliform teeth, margin broadly expanded, contracted at the back.

ROTHWELL. Pfeiffer (Bulimus), Mon. 1868, p. 70.

Hab Syria.

Species 119. (Mus. Hanley.)

PUPA PRODUCTA. *Pup. testâ altissimâ, cylindricâ, albâ, densè liratâ; anfractibus septem, tribus superioribus brevibus, rotundis, tribus medianis rectis, ad suturam compressis, ultimo minutè umbilicato; aperturâ majùsculâ, propè suturam unidentato, margine subincrassato, lateraliter paulò producto.*

THE PRODUCED PUPA. Shell very tall, cylindrical, white, closely ridged; whorls seven, three upper

short, rounded, three middle straight, compressed at the suture, last with a small umbilicus; aperture rather large, with a tooth near the suture, margin rather thickened, a little produced laterally.

ADAMS. Proc. Zool. Soc.

Hab. Mauritius.

Species 120. (Mus. Hanley.)

PUPA PAMPHORODON. *Pup. testâ sinistrali, fuscâ, ovato-oblongâ, subventricosâ, tenuiter obliquè liratâ; apice obtuso; anfractibus novem, brevissimis, ultimo longè et latè rimato, ad dorsum aperturâ contractâ; aperturâ albâ, obliquè productâ, intùs angustissimè dentibus laminatis prominentibus contractâ, margine lato, tenui, producto.*

THE BEAK-TOOTHED PUPA. Shell sinistral, brown, ovate-oblong, rather ventricose, finely obliquely ridged; apex obtuse; whorls nine, very short, last with a long and broad notch, contracted at the back of the aperture; aperture white, obliquely produced, contracted within very narrowly by laminated prominent teeth, margin broad, thin, produced.

BENSON. Ann. and. Mag. Nat. Hist. 3rd series, June 1864.

Hab. Near Simon's-Town, Cape of Good Hope.

Species 121. (Mus. Hanley.)

PUPA CALATHISCUS. *Pup. testâ parvâ, fuscâ, brevi, ventricosâ, costis validis, distantibus, prominentibus, rotundis liratâ, medio anfractuum fusco unifasciatâ; apice obtuso; anfractibus septem, apicalibus parvis, lævigatis, medianis tumidis, latis, ultimo medio infràque contracto, breviter rimato; aperturâ brevi, plicâ suturali magnâ, columellari parvâ, labio externo intùs triplicato.*

THE LITTLE-BACKED PUPA. Shell small, brown, short, ventricose, ridged with strong, distant, prominent, rounded ribs, with a brown band in the middle of the whorls; apex obtuse; whorls seven, apical, small, smooth, middle tumid, broad, last contracted in the middle and under, with a short notch; aperture short, sutural plait large.

LOWE. Pfeiffer, Mon. 1868.

Hab. Porto Santo, Madeira.

Species 122. (Mus. Hanley.)

PUPA CYLINDRELLUS. *Pup. testâ albâ, tenui, semipellucidâ, lævigatâ, clavatâ; apice obtuso; anfractibus octo, superioribus brevissimis, rapidè crescentibus, medianis et inferioribus gradatim attenuatis, altiùsculis, convexiùsculis, ultimo profundè rimato, infrà contracto; aperturâ subovatâ, plicâ suturali magnâ.*

THE LITTLE-CYLINDER PUPA. Shell white, thin, semipellucid, smooth, club-shaped; apex obtuse; whorls eight, upper very short, rapidly increasing, middle and lower gradually attenuated, rather high, rather convex, last deeply notched, contracted below; aperture rather oval, with large sutural plait.

A. ADAMS. Proc. Zool. Soc.

Hab. Isl. Bourbon.

Species 123. (Mus. Hanley.)

PUPA STRIATICOSTATA. *Pup. testâ albâ, solidiùsculâ, subpyramidatâ, densè obliquè costellatâ, costellis elevatis, lævibus, incisis; ultimo anfractu umbilicato et breviter rimato; aperturâ majùsculâ, subquadratâ, edentulâ; columellâ intùs medio tumidiùsculâ.*

THE STRIA-RIBBED PUPA. Shell white, rather solid, subpyramidal, closely obliquely ribbed, ribs raised, smooth, incised; last whorl umbilicated and shortly notched; aperture rather large, rather square, toothless; columella rather tumid within at the middle.

MORELET. Rev. et Mag. Zool. XVIII., 1866.

Hab. Mauritius.

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PUPA.

PLATE XIV.

Species 124. (Mus. Hanley.)

PUPA ROSSMASLERI. *Pup. brevi, ventricosâ, conicâ, pallidè corneâ, tenuiter obliquè costellatâ; anfractibus sex, brevibus, rapidè latitudine crescentibus, ultimo longè rimato; aperturâ parvâ, ad medium ultimi anfractûs elevatâ, intus marginem septemdentatâ.*

ROSSMASLER'S PUPA. Shell short, ventricose, conical, pale horny, finely obliquely ribbed; whorls six, short, rapidly widening, last with a long notch; aperture small, raised to the middle of the last whorl, with seven teeth within the margin.

SCHMIDT, Pfeiffer, Monog. 1868, p. 323.

Hab. Illyria.

Species 125. (Mus. Hanley.)

PUPA STENOPHYLIS. *Pup. testâ parvâ, albâ, semipellucidâ, costatâ, pupæformi, brevi; anfractibus sex, apicalibus duobus parvis, lævigatis, medianis ventricosis, inferioribus gradatim attenuatis, ultimo infrà angustato, longè rimato; aperturâ parvâ, angustatâ, prope suturam ultimi anfractûs elevatâ, labio externo supra medium valdè sinuato, unidentato, plicâ suturali maximâ, descendenti.*

THE NARROW-LEAFED PUPA. Shell small, white, semipellucid, ribbed, chrysalis-shaped, short; whorls six, two apical small, smooth, middle ventricose, lower gradually attenuated, last narrow below, with a long notch; aperture small, narrow, raised to near the suture of the last whorl, outer lip with a strong bend above the middle, with one tooth, sutural plait very large, descending.

BENSON. Fid. Hanley.

Hab. Khasi.

Species 126. (Mus. Hanley.)

PUPA NOVAZELANDICA. *Pup. testâ cylindricâ, fuscâ rudè costatâ; anfractibus sex, apicalibus subcomplanatis, ultimo umbilicato; aperturâ parviùsculâ, simplici.*

THE NEW ZEALAND PUPA. Shell cylindrical, brown, coarsely ribbed; whorls six, apical rather flattened, last umbilicated; aperture rather small, simple.

PFEIFFER. (Vertigo) Mon. 1868, p. 299.

Hab. New Zealand.

Species 127. (Mus. Hanley.)

PUPA MONDRAINI. *Pup. testâ solidiùsculâ, albâ, breviter cylindraceâ, tenuiter costatâ; anfractibus septem, apicalibus rapidè crescentibus, brevissimis, duobus medianis ventricosis, rotundis, ultimo alto, infrà umbilicato; aperturâ subquadratâ, edentulâ, elevatâ, marginе simplici angustè reflexo.*

MONDRAINE'S PUPA. Shell rather solid, white, shortly cylindrical, finely ribbed; whorls seven, apical, quickly increasing, very short, two middle ventricose, rounded, last high, umbilicated below; aperture rather square, toothless, raised, margin simple, narrowly reflected.

ADAMS. Proc. Zool. Soc.

Hab. Mauritius.

Species 128. (Mus. late Deshayes.)

PUPA BOURGUIGNATI. *Pup. testâ crassiùsculâ, albâ, irregulariter striatâ, breviter subpyramidatâ; ultimo anfractu breviter rimato; aperturâ subobliquè quadratâ, ad anfractum ultimum medio unidentatâ, margine medio subdepresso.*

BOURGUIGNATI PUPA. Shell rather thick, white, irregularly striated, short, subpyramidal; last whorl shortly notched; aperture rather obliquely square, with a single tooth at the last whorl, in the middle, margin rather depressed in the middle.

DESHAYES. Conch. île. Réunion, Pl. XXXVII., Fig. 27, 28.

Hab. Isl. Bourbon.

Species 129. (Mus. late Deshayes.)

PUPA INTERSECTA. *Pup. testâ crassiùsculâ, albidâ, subpyramidatâ, prope apicem tumidiùsculâ; anfractibus octo, tribus superioribus lævibus, cæteris lentè crescentibus, liris inæqualibus irregularibus, distantibus, obliquis sculptis; aperturâ subquadratâ, supernè unidentatâ.*

THE INTERSECTED PUPA. Shell rather thick, rather white, rather pyramidal, a little swelled near the apex; whorls eight, three upper smooth, the others slowly increased, sculptured with unequal, irregular, distant oblique ridges; aperture rather square, with a single tooth above.

DESHAYES. Conch. de l'île de la Réunion, Pl. XXVIII. Fig. 1.

Hab. Isl. Bourbon.

Species 130. (Mus. Hanley.)

PUPA FERRARI. *Pup. testâ cylindricâ, altâ, fuscâ, crebricostatâ; anfractibus octo, superioribus brevissimis, ultimo alto, recto, infrà latè umbilicato, carinâ desinenti; aperturâ parvâ, angustâ, plicis duobus, prominentibus, acutis, subinternis ad columellam et anfractum ultimum armatâ, labio externo, supernè sinuato, tum dente magno incrassato.*

FERRARI'S PUPA. Shell cylindrical, high, brown, close-ribbed; whorls eight, upper very short, last high, straight, broadly umbilicated below, ending in a keel; aperture small, narrow, armed with two prominent short subinternal teeth at the columella and last whorl, outer lip sinuated above, then thickened with a large tooth.

PORRO. Pfeiffer, Mon. 1868, p. 309.

Pupa biplicata, Rossmässler.

Pupa guttula, Porro.

Hab. Upper Italy.

Species 131. (Mus. Hanley.)

PUPA VENTRICOSA. *Pup. testâ parvâ, brevissimâ, subglobosâ, tenui, fusco-corneâ; anfractibus quatuor, apicalibus pyramidatis, ultimo subgloboso; aperturâ rotundâ, supernè unidentatâ.*

THE VENTRICOSE PUPA. Shell small, very short, rather globose, thin horny brown; whorls four, apical pyramidal, last rather globose; aperture rounded, with a single tooth above.

ADAMS. Proc. Zool. Soc.

Hab. Mauritius.

Species 132. (Mus. Hanley.)

PUPA PUPULA. *Pup. testâ minutâ, corneâ, lævi, cylindricâ; apice obtuso; ultimo anfractu breviter rimato; aperturâ brevi subquadratâ, intùs tridentatâ, columellâ obliquâ.*

THE PUPIL PUPA. Shell minute, horny, smooth, cylindrical; apex obtuse; last whorl shortly notched; aperture short, rather square, tridentate within, columella oblique.

DESHAYES. Conch. de l'île de la Réunion. Pl. XXXVIII., Fig. 2.

Hab. Isl. Bourbon.

Species 133. (Mus. late Deshayes.)

PUPA TURGIDULA. *Pup. testâ brevissimâ, parvâ, obtusâ, breviter rimatâ, densè liratâ, ventricosissimâ; aperturâ edentulâ, brevi, subobliquâ, supernè quadratâ, infrà rotundâ.*

THE TURGID PUPA. Shell very short, small, obtuse, with a short notch, closely ridged, very ventricose; aperture toothless, short, rather oblique, square above, rounded below.

DESHAYES. Conch. de l'île de la Réunion.

Hab. Isl. Bourbon.

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G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

PUPA.

PLATE XV.

Species 134. (Mus. Hanley.)

PUPA FERRARIA. *Pup. testâ parvâ, altâ, cylindricâ, ferrugineâ; apice obtuso; anfractibus sex, convexis, tenuissimè costulatis, ultimo rimato; aperturâ subquadratâ, intùs quinqueplicatâ, supernè prope suturam unidentatâ.*

THE IRON PUPA. Shell small, high, cylindrical, ferruginous; apex obtuse; whorls six, convex, very finely ribbed, last notched; aperture subquadrate, with five plaits inside; one tooth above, near the suture.

LOWE. Pfeiffer, Mon. 1868.

Hab. Porto Santo.

Species 135. (Mus. Hanley.)

PUPA VINCTA. *Pup. testâ subpyramidatâ, fusco-corneâ, politâ; apice obtuso; ultimo anfractu lato, longè rimato; aperturâ parvâ, subquadratâ, columellâ plicâ albâ, tenui, elongatâ, ultimo anfractu plicis duabus inæqualibus, arcuatis, superiori elongatissimâ, instructis labio externo supernè sinuato, unidentato; laminâ internâ filiformi.*

THE BOUND PUPA. Shell rather pyramidal, horny brown, polished; apex obtuse; last whorl broad, with a long notch; aperture small, rather square, columella set with a white thin long plait, last whorl with two unequal, arched, the upper very long; outer lip sinuous above, with a tooth; internal lamina filiform.

LOWE. Pfeiffer, Mon. 1868, p. 21.

Hab. Madeira.

Species 136. (Mus. Hanley.)

PUPA SPHINCTOSTOMA. *Pup. testâ altâ, corneâ, tenui, inæqualiter liratâ; ultimo anfractu rimato et umbilicato, ad dorsi medium per laminam internam contracto, ad aperturam plicâ parvâ, et plicâ suturali elongatissimè extenso munito, columellâ uniplicatâ, labio externo supernè sinuato et unidentato.*

THE SPHINX-MOUTHED PUPA. Shell high, horny, thin, unequally ridged; last whorl notched and umbilicated, contracted at the middle of the back by the internal lamina, furnished at the aperture with a small plait and a very far extended sutural plait; columella with one plait, outer lip with a sinus and a tooth above.

LOWE. Pfeiffer, Mon. 1868.

Hab. Madeira.

Species 137. (Mus. Hanley.)

PUPA CASSIDA. *Pup. testâ brevi, ventricosâ, rubro-fuscâ, dimidiatim albo-maculatâ, tenuiter liratâ, liris rectiùsculis; apice obtuso, anfractibus septem, brevissimis; ultimo brevi, usque ad medium albo-maculato, infrà medium immaculato, lævigato; aperturâ subtrigonâ, infrà acuminatâ, per plicas albas, validas, contractâ.*

THE HELMET PUPA. Shell short, ventricose, red-brown, half white-spotted, finely ridged, ridges rather straight; apex obtuse, whorls seven, very short; last short, white-spotted as far as the middle; not spotted below the middle; smooth; aperture rather trigonal, acuminated below, contracted by white strong plaits.

LOWE. Pfeiffer, Mon. 1868, p. 373.

Hab. Madeira.

Species 138. (Mus. Hanley.)

PUPA ARMIFERA. *Pup. testâ pallidâ, corneâ, semi-pellucidâ, brevi, obtusâ; anfractibus sex, brevibus, mediaxis inflatis, ultimo umbilicato; aperturâ elevatâ, brevi, intùs quadriplicatâ.*

THE ARM-BEARING PUPA. Shell pale, horny, semi-pellucid, short, obtuse; whorls six, short; middle inflated, last umbilicated; aperture raised, short, four-plaited within.

SAY. Pfeiffer, Mon. 1868, p. 29.
Hab. N. America.

Species 139. (Mus. Hanley.)

PUPA CONCINNA. *Pup. testâ fuscâ, tenuissimè striatâ, brevi; apice obtuso; anfractibus sex, brevibus, medianis ventricosis, ultimo longè rimato; aperturâ elevatâ, plicis quinque principalibus, cæteris minutis, suturali latissimè expansa, descendenti.*

THE NEAT PUPA. Shell brown, very finely striated, short; apex obtuse, whorls six, short, middle ventricose, last with a long notch; aperture raised, five principal plaits, others minute, sutural very broadly expanded, descending.

LOWE. Pfeiffer, Mon. 1868, p. 310.
Hab. Madeira.

Species 140. (Mus. Hanley.)

PUPA PENTODON. *Pup. minutâ, corneâ lævigatâ, brevi, ventricosâ, anfractibus tribus rotundis, aperturâ brevi, latiùsculâ, dentibus quinque, ad anfractum ultimum uno, ad columellam uno, ad marginem internum labii externi tribus, mediano longè producto.*

THE FIVE-TOOTHED PUPA. Shell minute, horny, smooth, short, ventricose; whorls five, one on the last whorl, one on the columella, three on the inner edge of the outer lip, middle long, produced.

SAY. Binney, Terrestrial Mollusca, p. 143.
P. curvidens, Gould.
P. Tappaniana, Ward.
Hab. North America.

Species 141. (Fig. *a*, *b*. Mus. Hanley.)

PUPA LAYARDI. *Pup. testâ lævigatâ, fuscâ, vel albo-vitreâ; altâ, pyramidatâ, versus apicem attenuatâ, medio subventricosâ; anfractibus novem, convexiùsculis, ultimo angustiùsculo, longè rimato, ante aperturam subsoluto, producto, coarctato; aperturâ subovatâ, margine externo tenuissimo, interno quinqueplicato, plicis laminatis, productis, medio approximatis.*

LAYARD'S PUPA. Shell smooth, brown, or glassy white; high, pyramidal, attenuated towards the apex, rather ventricose in the middle; whorls nine, rather convex, last rather narrow, with a long notch, a little uncoiled before the aperture, produced, narrowed; aperture ovate, outer edge very thin, inner five-plaited, plaits laminar, produced, nearly meeting in the middle.

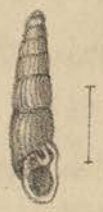
BENSON. Ann. and Mag. Nat. Hist., 3 Ser. XIII. June, 1864.
Hab. Cape Bredasdorp.

Species 142. (Mus. Hanley.)

PUPA SHUTTLEWORTHI. *Pup. testâ minutâ, fuscâ, lævi, brevi, ventricosâ; anfractibus quinque, ventricosis, ultimo longè rimato; aperturâ parvâ, brevi, ad anfractum ultimum uniplicatâ.*

SHUTTLEWORTH'S PUPA. Shell minute, brown, smooth, short, ventricose; whorls five, ventricose, last with a long notch; aperture small, short, with a single plait on the body whorl.

ALBERS. Pfeiffer (Bulimus), Mon. 1868.
Hab. Columbia.



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G.B. Sowerby del et Lith.

Vincent Brooks Day & Son Imp

PUPA.

PLATE XVI.

Species 143. (Mus. Hanley.)

PUPA PIRREEI. *Pup. testâ albâ, altâ, lævi; anfractibus septem, tribus superioribus brevibus, rotundis, politis, quatuor inferioribus rectilateralibus, striatis, altis, ad suturam subangulatis, ultimo infrà subangulato, rimato; aperturâ rectâ, perpendiculariter oblongâ, callo saturali conspicuo, magno.*

PIRREE'S PUPA. Shell white, high, smooth; whorls seven, three upper short, round, polished, four lower straight-sided, striated, high, with a slight angle at the suture, the last angular below, notched; aperture straight, perpendicularly oblong, with a conspicuous large, sutural callus.

PFEIFFER. (Eunea.) Proc. Zool. Soc. 1854, p. 295.

Hab. Koondah Mountains, near Calicut.

Species 144. (Mus. Hanley.)

PUPA VARA. *Pup. testâ albâ, fusiformi, regulariter costatâ; anfractibus septem, superioribus duobus rotundis lævissimis, medianis inflatis, convexis, ultimo contracto, tortuoso; aperturâ elevatâ, auriformi, labio externo supra medium validissimè sinuatim plicato.*

THE VARA PUPA. Shell white, fusiform, regularly ribbed; whorls seven, upper two rounded, very smooth; middle inflated, convex, last contracted, tortuous; aperture raised, ear-shaped, outer lip very strongly sinuously plaited.

BENSON. (Eunea.) Ann. Nat. Hist. 1859.

Hab. Khasi Hills.

Species 145. (Mus. Hanley.)

PUPA CEYLANICA. *Pup. testâ albâ, lævigatâ, semipellucidâ; anfractibus sex, breviùsculis, prominentibus; aperturâ elevatâ, obliquè retrorsâ, triplicatâ, callo suturali conspicuo, margine reflexo.*

THE CEYLON PUPA. Shell white, smooth, semipellucid; whorls six, rather short, prominent; aperture raised, obliquely bent backwards, with three plaits, sutural callus conspicuous, margin reflected.

PFEIFFER. (Eunea.) Proc. Zool. Soc. 1855.

Hab. Ceylon.

Species 146. (Mus. Sir D. Barclay.)

PUPA BARCLAYI. *Pup. testâ brevi, obtusâ, subcylindricâ, albâ, obliquè costatâ; anfractibus quinque, rectilateralibus, ultimo alto, infrà umbilicato et rimato; aperturâ magnâ, perpendiculariter oblongâ, anticè obliquè productâ, plicâ medianâ anfractûs ultimi magnâ, columellâ edentulâ, profundâ.*

BARCLAY'S PUPA. Shell short, obtuse, subcylindrical, white, obliquely ribbed; whorls five, rectilateral, last high, umbilicated and notched below; aperture large, perpendicularly oblong, anteriorly obliquely produced, median plait of the last whorl large, columella toothless, deep.

H. ADAMS. Proc. Zool. Soc. 1868, Pl. IV.

Hab. Mauritius.

Species 147. (Mus. Hanley.)

PUPA LAPIDARIA. *Pup. testâ, altâ, corneâ, lævi, versus apicem subypramidatâ, apice obtuso, supra medium et infra cylindricâ; anfractibus septem, rectilateralibus, ultimo alto, profandè rimato; aperturâ ovatâ, albâ, prominenter triplicatâ, labio externo supra medium tumido.*

THE LAPIDARY PUPA. Shell raised, horny, smooth, rather pyramidal towards the apex, apex obtuse, cylindrical above the middle and below; whorls seven, straight-sided, last high, deeply notched; aperture ovate, white, with three prominent plates, outer lip tumid above the middle.

HUTTON. Journ. As. Soc. Beng. 1849.

Hab. Affghanistan.

Species 148. (Mus. Hanley.)

PUPA BICOLOR. *Pup. testâ altissimâ, hyalinâ, albâ; anfractibus septem, apicalibus tumidis, alteris subquadratis, ultimo alto, infrà subcontracto, rimato; aperturâ subauriformi, conspicuè triplicatâ, labio externo supra medium profundè sinuato, callo suturali conspicuo.*

THE TWO-COLOURED PUPA. Shell very high, glassy, white; whorls seven, apical tumid, others rather square, last high, a little contracted below,

notched; aperture rather auriform, conspicuously three-plaited, outer lip with a deep sinus above the middle, sutural callus conspicuous.

HUTTON. Journ. As. Soc. Beng. 1834.

Pupa mellita, Gould.

Hab. Mirzapore, Tavoy, Ceylon.

Species 149. (Mus. Sir D. Barclay.)

PUPA CERNICA. *Pup. testâ brevi, opacâ, sordidè albâ, crebrè liratâ, cylindricâ; apice obtuso; anfractibus sex, superioribus brevissimis, alteris latis, ultimo profundè rimato et umbilicato; aperturâ ad ultimum anfractum uniplicatâ.*

THE MAURITIAN. Shell short, opaque, dull white, closely ridged, cylindrical; apex obtuse; whorls six, upper very short, others wide, last deeply notched and umbilicated; aperture with a single plait on the last whorl.

A. ADAMS. Proc. Zool. Soc. 1868, Pl. IV.

Hab. Mauritius.

Species 150. (Mus. Hanley.)

PUPA SALWINIANA. *Pup. testâ latè pyramidatâ, brevi, corneâ, apice acuminato, anfractibus sex, rapidè crescentibus, ultimo longè rimato; aperturâ ferè ad suturam ultimi anfractûs elevato, subauriformi, anticè obliquè producto, prominenti quadriplicato, margine albo, labio externo supra medium sinuato.*

SALWIN'S PUPA. Shell broadly pyramidal, short, horny, apex acuminated; whorls six, rapidly increasing, last with a long notch; aperture raised almost to the suture of the last whorl, rather auriform, anteriorly obliquely produced, with four prominent plaits, margin white, outer lip sinuous above the middle.

THEOBALD. Journ. As. Soc. Beng. 1870.

Hab. Shan States.

Species 151. (Mus. Hanley.)

PUPA PLICIDENS. *Pup. testâ brevi, latâ, corneo-subviridi, lævi, spirâ pyramidatâ, apice obtuso; anfractibus quatuor, rotundè prominentibus, ultimo magno, infrà subangustatâ, longè rimatâ; aperturâ obliquè subauriformi, validè dentato-plicatâ.*

THE TOOTHPLAITED PUPA. Shell short, broad, greenish-horny, smooth, spire pyramidal, apex obtuse; whorls four, roundly prominent, last large, rather narrow below with a long notch; aperture obliquely rather auriform, with strong tooth-plaits.

BENSON. Ann. Nat. Hist. 1849.

Hab. Himalaya.

Species 152. (Mus. Hanley.)

PUPA BATHYODON. *Pup. testâ parvâ, pyramidatâ, lævi, fuscâ, apice acuminato; anfractibus quinque, rotundis, ultimo profundè rimato; aperturâ aurantiâ, quinqueplicatâ, anticè obliquè productâ.*

THE DEEP-TOOTHED PUPA. Shell small, pyramidal, smooth, brown, apex acuminated; whorls five, rounded, last deeply notched; aperture orange, five-plaited, anteriorly obliquely produced.

BENSON. Ann. Nat. Hist. 1863.

Hab. Narbudda.

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G.B. Sowerby del. et Lith.

Vincent Brooks Day & Son imp.

PUPA.

PLATE XVII.

Species 153. (Mus. Hanley.)

PUPA SCALARINA. *Pup. testâ fuscâ, fusiformi, profundè rimatâ; spirâ acuminatâ; anfractibus quinque, angulatis, plicatis; ultimo ad medium contracto; aperturâ auriformi, plicis tribus, labio externo supra medium sinuatim contracto.*

THE SCALARIFORM PUPA. Shell brown, fusiform, deeply notched; spire acuminated; whorls five, angular, plaited, last contracted in the middle; aperture ear-shaped, with three plaits, outer lip sinuously contracted above the middle.

GUNDLACH. Pfeiffer, Malak. Bl. 1860.

Hab. Sicily (?), Cuba.

Species 154. (Mus. Hanley.)

PUPA NITIDA. *Pup. testâ parvâ, brevi, subventricosâ, lævi, fuscâ; anfractibus quinque, rotundis, brevibus, suturâ profundâ; aperturâ brevi, edentulâ.*

THE SHINING PUPA. Shell small, short, rather ventricose, smooth, brown; whorls five, round, short, suture deep; aperture short, without teeth.

ANTONELLI. Pfr. Mon. II. p. 335.

Hab. Greece.

Species 155. (Mus. Hanley.)

PUPA BOREALIS. *Pup. testâ minutâ, subdiaphanâ, succineâ; anfractibus quinque ad sex, altiùsculis, subventricosis, ultimo rimato; aperturâ brevi, dentibus minutissimis.*

THE BOREAL PUPA. Shell minute, a little transparent, amber; whorls five or six, rather high, rather ventricose, the last notched; aperture short, with very minute teeth.

MORELET. Journ. Conch. VII. 1858.

Hab. Kamtschatka.

Species 156. (Mus. Hanley.)

PUPA GRANUM. *Pup. testâ elongato-fusiformi, fuscâ, altâ, angustâ; anfractibus octo, altiùsculis, superioribus versus apicem attenuatis, ultimo brevi, longè rimato; aperturâ parvâ, plicis circà quinque.*

THE GRAIN PUPA. Shell elongate, fusiform, brown, high, narrow; whorls eight, rather raised, upper attenuated towards the apex, last short with a long notch; aperture small, plaits about five.

DRAPARNAUD. Conch. Terrest. et Fluv.

Hab. France, Spain, Greece, Italy, &c.

Species 157. (Mus. Hanley.)

PUPA FARINESII. *Pup. testâ pyramidatâ, altâ, purpureo-fuscâ, lævi; anfractibus sex, gradatim crescentibus, convexiùsculis, ultimo magno, ventricoso, longè rimato; aperturâ ovatâ, edentulâ, margine tenui.*

FARINE'S PUPA. Shell pyramidal, raised, purple-brown, smooth; whorls six, gradually increased, rather convex, last large, ventricose, with long notch; aperture ovate, without teeth, margin thin.

DESMAREST. Rev. et Mag. Zool. XV. 1862.

Hab. Pyrenees.

Species 158. (Mus. Hanley.)

PUPA TRUNCATELLA. *Pup. testâ albidâ, cylindricâ, rectè liratâ; anfractibus sex, inferioribus tribus subæqualibus, duobus apicalibus minutis, ultimo alto, cylindrico, breviter rimato et umbilicato.*

THE TRUNCATELLA PUPA. Shell whitish, cylindrical, straightly ridged; whorls six, lower three nearly equal, two apical minute, last raised, cylindrical; shortly notched and umbilicated.

PFEIFFER. Mon. Vol. IV. 1868.

Hab. Transylvania, Turkey.

Species 159. (Mus. Hanley.)

PUPA BIGRANATA. *Pup. testâ cylindricâ, minutâ, brevi, fulvâ, lævi; anfractibus septem, medianis subæqualibus; ultimo breviter rimato; aperturâ parvâ, margine profundè incrassato, ultimo anfractu unidentato.*

THE TWO-GRAINED PUPA. Shell cylindrical, minute, short; whorls seven, middle ones nearly equal, last shortly notched; aperture small, margin deeply thickened, last whorl with a single tooth.

ROSSMASLER. Pffr. Mon. II. p. 354.

Hab. Germany.

Species 160. (Mus. Hanley.)

PUPA ROWELLII. *Pup. testâ minutâ, fuscâ, politâ, ventricosâ; anfractibus quatuor, ultimo et penultimo ventricosis, altis, ultimo longè rimato; aperturâ subtrigonâ, plicis dentiformibus tribus vel quatuor.*

ROWELL'S PUPA. Shell minute, brown, smooth, ventricose; whorls four, last and last but one ventricose, high, last with a long notch; aperture subtrigonal, with three or four tooth-like plaits.

NEWCOMB. Ann. Lyc. New York, VII. 1861.

Hab. Oakland, California.

Species 161. (Mus. Hanley.)

PUPA CUPA. *Pup. testâ breviter cylindricâ, corneâ, apice obtuso; anfractibus quinque, brevibus, tribus inferioribus latis, lævibus, ultimo profundè rimato, ad aperturam unidentato; aperturâ parvâ, subrotundâ, margine profundè incrassato.*

THE BUTT PUPA. Shell shortly cylindrical, horny, apex obtuse; whorls five, short, three lower broad, smooth, last deeply notched, with a single tooth at the aperture; aperture small, rather round, margin deeply thickened.

KÜSTER. Fide Hanley.

Hab. Switzerland.

Species 162. (Mus. Hanley.)

PUPA NITENS. *Pup. testâ parvâ, pallidè corneâ, subpyramidatâ, apice obtuso; anfractibus quatuor, declivibus, ultimo magno, profundè rimato; suturâ profundâ; aperturâ parvâ, subquadratâ, plicis quatuor, unâ ad anfractum ultimum productâ, bifidâ, unâ columellari, duabus intus labium externum instructis parvis, rotundis.*

THE SHINING PUPA. Shell small, pale, horny, rather pyramidal, apex obtuse; whorls four, sloped, last large, deeply notched; suture deep, aperture small, rather square, with four plaits, one at the last whorl, produced, bifid, one columellar, two small, round, placed within the outer lip.

PEASE. Proc. Zool. Soc. 1860, p. 439.

Hab. Isl. Ebon, Marshall's Group.

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G.B. Sowerby del. et Lith

Vincent Brooks Day & Son Imp

PUPA.

PLATE XVIII.

Species 163. (Mus. Sowb.)

PUPA MINUTISSIMA. *Pup. testâ minutâ, fuscâ, cylindricâ, lævi, apice obtuso; anfractibus quinque, rotundis, tribus inferioribus subæqualibus, ultimo profundè rimato; aperturâ parvâ, subovatâ, ad anfractum ultimum unidentatâ.*

THE VERY SMALL PUPA. Shell minute, brown, cylindrical, smooth, with obtuse apex; whorls five, rounded, three lower nearly equal, last with a deep notch; aperture small, rather oval, with a single tooth on the last whorl.

HARTMAN. Pfeiffer, Mon. 1868, p. 301.

Hab. Central Europe.

Species 164. (Mus. Hanley.)

PUPA MILLIUM. *Pup. testâ minutâ, corneâ, subdiaphanâ, politâ, cylindricâ, apice obtuso; anfractibus quatuor, inferioribus subæqualibus; aperturâ parvâ, quinqueplicatâ.*

THE MILLET PUPA. Shell minute, horny, rather transparent, polished, cylindrical, apex obtuse; whorls four, the lower ones nearly equal; aperture small, five-plaited.

GOULD. Pfeiffer, Mon. 1868, p. 335.

Hab. North America.

Species 165. (Mus. Hanley.)

PUPA DECORA. *Pup. testâ minutâ, pallidè corneâ, subcylindricâ, subdiaphanâ, lævi; anfractibus quinque, apicalibus subattenuatis, ultimo breviter rimato; aperturâ parvâ, quadridentatâ.*

THE DECOROUS PUPA. Shell minute, pale horny, subcylindrical, a little transparent, smooth; whorls five, apical ones rather attenuated, last shortly notched; aperture small, four-toothed.

GOULD. Otia Conchologica, p. 202.

Hab. North America.

Species 166. (Mus. Hanley.)

PUPA POTTEBERGENSIS. *Pup. testâ sinistrorsâ, pallidissimè roseâ, subcylindricâ, subventricosâ, lævi, apice obtuso, fusco; anfractibus novem, superioribus subattenuatis, alteris subæqualibus, ultimo longè rimato, profundè umbilicato; aperturâ ad anfractum ultimum elevatâ, prope marginem quinqueplicatâ, margine tenui.*

THE POTTEBERG PUPA. Shell sinistral, very pale rose, rather cylindrical, rather ventricose, smooth, apex obtuse, brown; whorls nine, upper rather attenuated, the others nearly equal, last with a long notch, deeply umbilicated; aperture raised on the last whorl, five-plaited near the margin, margin thin.

KRAUSS. Pfeiffer, Mon. 1868, p. 297.

Hab. Cape of Good Hope.

Species 167. (Mus. Hanley.)

PUPA RECTA. *Pup. testâ elongatâ, cylindricâ, angustâ, lævi, corneâ, fusco-rubescenti trifasciatâ, apice obtuso; anfractibus septem, duobus apicalibus parvis, alteris subæqualibus, rectis, ultimo longè rimato; aperturâ parvâ, auriformi, plicis ad anfractum ultimum duabus, ad columellam unâ, intùs unâ, elongatâ, labio externo supra medium sinuatim incrassato.*

THE STRAIGHT PUPA. Shell elongated, cylindrical, narrow, smooth, horny, three-banded with reddish-brown, apex obtuse; whorls seven, two apical small, others nearly equal, straight, last with a long notch; aperture small, ear-shaped, plaits on the last whorl two, on the columella one, inside one elongated, outer lip sinuously thickened above the centre.

LOWE. Pfr. Mon. 1868, p. 309.

Hab. Madeira.

The whorls are banded with a vinous brown.

Species 168. (Mus. Hanley.)

PUPA MONTICOLA. *Pup. testâ brevi, cylindricâ, crebrè liratâ, medio anfractuum et ad suturam rubro fasciatâ; anfractibus sex, apicalibus duobus obtusissimè compressis, alteris subæqualibus, ultimo ad medium subcompresso, longissime rimato; aper-*

turâ angustâ, subovatâ, ad anfractum ultimum intùs uniplicatâ, ad marginem prope suturam plicâ callosâ suprà infràque extersâ instructâ, labio externo intùs biplicato.

THE MOUNTAIN PUPA. Shell short, cylindrical, closely ribbed, banded with red in the middle and at the suture of the whorls; whorls six, two apical very bluntly flattened, the others nearly equal, last rather compressed in the middle, with a very long notch; aperture narrow, subovate, with a single plait within on the body whorl, near the suture at the margin set with a callous plait extended over and under, outer lip with two inner plaits.

LOWE. Pffr. Mon. 1868, p. 311.

Hab. Porto Santo, Madeira.

Species 169. (Mus. Hanley.)

PUPA PLANTI. *Pup. testâ ventricosâ, tenui, subdiaphanâ, albidâ, tenuiter obliquè liratâ, apice obtuso; anfractibus septem, latis, convexiùsculis, ultimo breviter rimato, aperturæ latere subcompresso; aperturâ brevi, latâ, callo suturali acuto, plicâ columellari internâ latâ, laminatâ.*

PLANT'S PUPA. Shell very ventricose, thin, subdiaphanous, whitish, finely obliquely ridged, apex obtuse; whorls seven, broad, rather convex, last shortly notched, rather flattened on the side of the aperture; aperture short, broad, sutural callus sharp, columellar plait broad, laminated.

PFEIFFER. Proc. Zool. Soc.

Hab. Port Natal.

Species 170. (Mus. Hanley.)

PUPA SAXICOLA. *Pup. testâ minutâ, subviridè corneâ, subcylindricâ, nitenti, subdiaphanâ, apice obtuso; anfractibus quatuor, ultimo magno, longè rimato; aperturâ subovatâ, plicis ad anfractum ultimum duabus, columellari unâ, intùs duabus parvis, margine angusto, albo.*

THE ROCK-INHABITING PUPA. Shell minute, greenish-horny, subcylindrical, shining, rather transparent, apex obtuse; whorls four, the last large, with a long notch; aperture rather oval, with two plaits on the last whorl, one columellar and two small within, margin narrow, white.

LOWE. Pffr. Mon. 1868, p. 321.

Hab. Madeira.

Species 171. (Mus. Hanley.)

PUPA IRRIGUA. *Pup. testâ fusco-corneâ, lævigatâ, subcylindricâ, supernè subattenuatâ; anfractibus septem, suturâ profundâ separatis, ultimo longè rimato; aperturâ subauriformi, supernè cuneatâ, supra medium contractâ, callo suturali et plicâ ultimi anfractûs valdè elongatis, plicâ internâ validâ, plicâ columellari elongatâ, declivi.*

THE BROOK PUPA. Shell brown-horn, smooth, rather cylindrical, rather attenuated above; whorls seven, separated by a deep suture, last with a long notch; aperture partly auriform, cuneate above, contracted above the middle, sutural callus and plait of the last whorl much elongated, internal plait strong, columellar plait elongated, sloped downwards.

LOWE. Pffr. Mon. 1868, p. 321.

Hab. Madeira.

The plaits in the mouth seem to fill it up by their great extension.

Species 172. (Mus. Hanley.)

PUPA EDENTULA. *Pup. testâ parvâ, corneâ, brevi, politâ, semipellucidâ, spirâ versus apicem paulò attenuatâ; anfractibus septem, rotundis, ultimo breviter rimato; aperturâ brevi, edentulâ, margine tenui.*

THE TOOTHLESS PUPA. Shell small, horny, short, polished, semipellucid, spire a little attenuated towards the apex; whorls seven, rounded, last shortly notched; aperture short, without teeth, margin thin.

DRAPARNAUD. Moll. Terr. et Fluv.

Hab. Europe.

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G.B. Sowerby del. et lith.

Vincent Brooks Day & Son imp.

PUPA.

PLATE XIX.

Species 173. (Mus. Hanley.)

PUPA TANTILLA. *Pup. testâ minutâ, ventricosâ, fuscâ, brevi; anfractibus quatuor, brevibus, ventricosis, rotundis, ultimo majusculo, infrà umbilicato; aperturâ obliquâ, subauriformi, quadridentatâ, labio externo supra medium tumido, sinuato.*

THE TINY PUPA. Shell minute, ventricose, brown, short; whorls four, short, ventricose, round, last rather large, umbilicated below; aperture oblique, rather auriform, four-toothed, outer lip tumid and sinuated above the middle.

GOULD. (Vertigo) Pfr. Mon. III.

Hab. Tahiti.

Species 174. (Mus. Hanley.)

PUPA ELEGANTULA. *Pup. testâ albâ, pellucidâ, clavatâ, supernè obtusâ, ventricosâ, infrà gradatim attenuatâ; anfractibus sex, apicali planulato, ultimo rimato, contracto; aperturâ subtrigonâ, callo suturali conspicuo.*

THE ELEGANT LITTLE PUPA. Shell white, pellucid, club-shaped, obtuse above, ventricose, gradually attenuated below; whorls six, apical flattened, last notched, contracted; aperture subtrigonal with conspicuous sutural callus.

PFEIFFER. Proc. Zool. Soc. 1846, p. 185.

Hab. Liberia.

A curiously formed little shell, very thick towards the apex, and gradually tapering downwards.

Species 175. (Mus. Hanley.)

PUPA ANGUSTIOR. *Pup. testâ minutâ, sinistrorsâ, fulvâ; anfractibus quinque, convexis, ultimo breviter umbilicato; aperturâ parvâ, latâ, triplicatâ, labio externo supra medium sinuato et dentato-plicatâ.*

THE NARROW PUPA. Shell minute, sinistral, fulvous; whorls five, convex, last shortly umbilicated; aperture small, broad, three-plaited, outer lip sinuous above the middle, with a tooth plait.

JEFFREYS. (Vertigo) Pfr. Mon. 1868, p. 336.

Vertigo Venetzii, Charpentier.

Vertigo hamata, Held.

Hab. Britain, France, Germany, Spain, &c.

Species 176. (Mus. Hanley.)

PUPA MENKEANA. *Pup. testâ breviùsculâ, albidâ, tenuiter et regulariter liratâ, ventricosâ, apice obtuso; anfractibus septem, medianis ventricosis, ultimo longè rimato, infrà contracto, dorso post aperturæ marginem contracto et profundè foveolato; aperturâ subquadratâ, intus et prope marginem latè et profundè plicatâ, margine reflexo, expanso.*

MENKE'S PUPA. Shell rather short, whitish, finely and regularly ridged, ventricose, apex obtuse; whorls seven, middle ventricose, last with a long notch, contracted below, contracted and deeply pitted at the back, behind the margin of the aperture; aperture subquadrate, within and near the margin broadly and deeply plaited, margin reflected, expanded.

PFEIFFER. (Azeca) Mon. 1868, p. 255.

Hab. Central Europe.

In the later monographs, Pfeiffer seems to have mixed up this shell with the well-known European *Azeca tridens*, with which it has little affinity.

Species 177. (Mus. Hanley.)

PUPA CAPITATA. *Pup. testâ albidâ, semipellucidâ, cylindricâ, brevi, prope apicem inflatâ; anfractibus quinque, obliquè tenuiter liratis, ultimo obliquè profundè rimato, infrà rimam tumido et subcarinato; aperturâ subauriformi, extùs contractâ, intùs dentato-plicatâ, plicâ suturali magnâ, expansâ, margine reflexo et expanso.*

THE HEADED PUPA. Shell whitish, semipellucid, cylindrical, short, inflated near the apex; whorls five, obliquely finely ridged, last obliquely deeply notched, tumid and partly keeled below the notch; aperture rather ear-shaped, contracted

without, tooth-plaited within, sutural plait large, expanded, margin reflected and expanded.

GOULD. —— ? (quoted by Hanley.)

Hab. Cape Patmos.

Species 178. (Mus. Hanley.)

PUPA FUNICULA. *Pup. testâ altâ, cylindricâ, solidâ, subroseâ, obliquè liratâ; apice obtuso; anfractibus sex, rectiùsculis, medianis subæqualibus, ultimo obtusissimè angulato vix rimato; aperturâ subquadratâ, edentulâ; margine reflexo, subexpanso; columellâ latâ.*

THE FUNNEL PUPA. Shell high, cylindrical, solid, rather pink, oblique-ridged, apex obtuse; whorls six, rather straight, middle nearly equal, last very obtusely angular, scarcely notched; aperture rather square, toothless; margin reflected, rather expanded; columella broad.

VALENCIENNES. Pfr. Mon. 1868, p. 287.

Hab. Isle of France.

Species 179. (Mus. Hanley.)

PUPA CYCLOSTOMA. *Pup. testâ brevi, ventricosâ, costis rectiùsculis sculptâ, subroseâ, apice obtusiùsculo, medio inflato; anfractibus sex, brevibus, ultimo profundè rimato; aperturâ subovatâ, columellâ et anfractu ultimo implicatis; margine albo reflexo, rotundo.*

THE ROUNDMOUTHED PUPA. Shell short, ventricose, sculptured with rather straight ribs, rather pink, apex rather obtuse, inflated in the middle; whorls six, short, last deeply notched; aperture rather ovate, columella and last whorl single-plaited; margin white, reflected, round.

KÜSTER. Pfeiffer, Mon. 1868, p. 293.

Pupa Küsteri, Pfeiffer (var.)

Hab. Cuba.

Species 180. (Mus. Hanley.)

PUPA LACHRYMA. *Pup. testâ albidâ, pellucidâ, clavatâ, cylindricâ, supernè tumidâ, infrà rectâ, apice obtuso; anfractibus sex, ultimo alto, infrà obliquè breviter rimato; aperturâ trigonâ, plicâ suturali et plicis dentiformibus tribus conspicuis, crassis.*

THE TEAR PUPA. Shell whitish, pellucid, club-shaped, cylindrical, tumid above, straight below, apex obtuse; whorls six, last high, with a short oblique notch below; aperture trigonal, sutural plait and three dentiform plaits conspicuous, thick.

AUCT. —— ? (Mus. Brit.)

Hab. Liberia.

Species 181. (Mus. Hanley.)

PUPA TERES. *Pup. testâ altâ, cylindricâ, eleganter obliquè liratâ, albâ, opacâ, supernè tumidâ, infrà subattenuatâ; anfractibus septem, inferioribus angustioribus, ultimo arcuatim rimato, suturâ profundâ; aperturâ edentulâ, perpendiculariter oblongâ.*

THE LONG-ROUNDED PUPA. Shell raised, cylindrical, elegantly obliquely ridged, white, opaque, tumid above, slightly attenuated below; whorls seven, lower narrower, last with a curved notch, suture deep; aperture toothless, perpendicularly oblong.

PFEIFFER. Mon. 1868, p. 297.

Helix palangula, Ferussac.

Hab. Mauritius.

Species 182. (Mus. Hanley.)

PUPA KURRII. *Pup. testâ sinistrorsâ, latè pyramidatâ, lævi, cœruleo-albidâ, apice acuminato; anfractibus octo, gradatim crescentibus, ultimo profundè et longè rimato, infra rimam tumido et subcarinato; aperturâ elevatâ, subtrigonâ, intùs quadruplicato callo suturali obliquè elongato, laminato, margine tenui, vix reflexo.*

KURR'S PUPA. Shell sinistral, broadly pyramidal, smooth, bluish-white, apex acuminated; whorls eight, gradually increasing, last with a deep long notch, tumid and slightly keeled below the notch; aperture raised, subtrigonal, with four plaits within sutural callus obliquely elongated, laminar, margin thin, scarcely reflected.

KRAUSS. Pfeiffer, Mon. 1868, p. 297.

Pupa ovularis, Kurr.

Pupa fonticola, Deshayes.

Hab. Cape of Good Hope.

185.

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*152.**

*32.**

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G.B. Sowerby del. et lith.

Vincent Brooks, Day & Son, Imp

PUPA.

PLATE XX.

Species 183. (Mus. Brit.)

PUPA ANTIVERTIGO. *Pup. testâ minutâ, dextrali, brevi, ventricosâ, lævigatâ; anfractibus quaternis; apice obtuso; aperturâ trigonâ, infrà acuminatâ, dentibus octonis aut novenis, utroque latere tribus.*

THE OPPOSITE WHORLED PUPA. Shell minute, dextral, short, ventricose, smooth; whorls four; apex obtuse; aperture trigonal, acuminated below, teeth, eight or nine, three on each side.

DRAPARNAUD. 'Tabl. des Mollusques de la France,' p. 59.

Pupa Octodentata. Hartman.

Hab. Great Britain, Ireland, and France.

The aperture is triangular, with two or three teeth on each side between the angles. The small shells belonging to the group named 'VERTIGO,' by some authors being sinistral, this species, exactly resembling them in other respects, receives the above name because it is dextral.

Species 184. (Mus. Hanley.)

PUPA MODICA. *Pup. testâ ovatâ; pallidè fulvâ, parvâ, sublævigatâ; anfractibus quinis, altiùsculis, convexis, suturâ profundâ; ultimo anfractu oblongo, rimato; aperturâ subovatâ, margine simplici, reflexo.*

THE UNPRETENDING PUPA. Shell ovate, pale fulvous, small, rather smooth; whorls five, rather elevated, convex, with deep suture; last whorl oblong, creased; aperture subovate; margin simple, reflected.

GOULD. —— ?

Hab. Florida.

A Bulimus-like little shell.

Species 185. (Mus. Brit.)

PUPA SUBSTRIATA. *Pup. testâ minutâ, fuscâ, dextrali, breviter cylindricâ, latâ, obliquè striatâ, anfractibus quaternis, brevibus; aperturâ subauriformi, margine reflexo, albo, sex-dentato.*

THE SUBSTRIATED PUPA. Shell minute, brown, dextral, shortly cylindrical, broad, obliquely striated, whorls four, short; aperture somewhat auriform, margin reflected, white, six-toothed.

GRAY. (Vertigo) Brit. Mus. MS.

Hab. Great Britain and Germany.

Species 186. (Mus. Brit.)

PUPA PUSILLA. *Pup. testâ minutâ sinistrali, fusco-fumosâ, lævi; anfractibus obliquis, apicali obtuso, ultimo subdeclivi; aperturâ sinuatim trigonâ, margine externo bidentato, interno supernè bidentato, columellâ uniplicatâ.*

THE DWARF PUPA. Shell minute, sinistral, smoky brown, smooth; whorls oblique, apical obtuse, last a little sloped; aperture sinuously trigonal, outer margin with two teeth, inner with two teeth above, columella with one fold.

MÜLLER. Pfeiffer Mon. Hel. VI. p. 336.

Pupa vertigo. Draparnaud.

Hab. Germany, Spain, England.

Species 187. (Mus. Brit.)

PUPA WALBERGI. *Pup. testâ subturbinatâ, cylindricâ, albâ, lævi, semipellucidâ, anfractibus septenis, apicalibus duobus depressis, alteris subæqualibus, ultimo angustato, breviter rimato; aperturâ brevi, subauriformi; plicâ suturali magnâ, dente columellari prominente, labio externo tridentato.*

WALBERG'S PUPA. Shell rather turbinated, cylindrical, white, smooth, semipellucid; whorls seven; apical two depressed, others nearly equal, last narrow, shortly creased; aperture short, rather auriform; sutural plait large, columellar tooth prominent, outer lip tridentate.

PFEIFFER. Mon. Hel. Vol. VII.

Hab. S. Africa.

Species 188. (Mus. Hanley.)

PUPA DESHAYESII. *Pup. testâ parvâ, albâ, cylindricâ-subturbinatâ; anfractibus octonis, brevibus costatis; ultimo profundè rimato; aperturâ sursùm acclivi, brevi; plicâ suturali conspicuâ.*

DESHAYES'S PUPA. Shell small, white, cylindrical, slightly turbinated; whorls eight, short, ribbed; last deeply creased; aperture turned upwards, short; sutural plait conspicuous.

ADAMS. —— ?

Hab. —— ?

Species 189. (Mus. Hanley.)

PUPA DORMEYERI. *Pup. testâ cylindricâ, turbinatâ, corneâ, lævi; anfractibus novenis, apicalibus parvis, sequentibus superioribus latis, inferioribus gradatim angustatis, ultimo profundè rimato, aperturâ subquadratâ, margine albo, profundo, plicâ suturali prominenti.*

DORMEYER'S PUPA. Shell cylindrical, turbinated, horny, smooth; whorls nine, apical small, following upper wide, lower gradually narrowed, last deeply creased; aperture subquadrate, margin white, deep, sutural plait prominent.

PARREYS —— ?

Hab. Greece.

Species 190. (Mus. Hanley.)

PUPA TRICOLOR. *Pup. testâ pruinosâ, subpyramidatâ, lævi, apice fusco, acuminato; anfractibus octonis, convexiùsculis, tribus inferioribus altis; ultimo profundè rimato, umbilicato, infrà umbilicum carinato; aperturâ subovatâ, margine fulvo, interrupto, plicâ suturali conspicuâ; plicis internis utrinque duabus.*

THE THREE-COLOURED PUPA. Shell plum-coloured, subpyramidal, smooth, apex brown, acuminated; whorls eight, rather convex, three lower high; last deeply creased, umbilicated, keeled below the umbilicus, aperture subovate, margin fulvous, interrupted, sutural plait conspicuous, inner plaits two on each side.

VILLA. —— ?

Hab. Lombardy.

Species 191. (Mus. Hanley.)

PUPA FUSCA. *Pup. testâ minutâ, breviter cylindricâ, fuscâ, tenuiter liratâ, anfractibus senis convexis, laminis internis tenuibus, numerosis, plicâ suturali proximâ, albâ, elongatâ.*

THE BROWN PUPA. Shell minute, shortly cylindrical, brown, with thin ridges; whorls six, convex; inner lamina thin, numerous, sutural plait approximate, white, elongated.

LOWE. De Paiva Mon. Moll. p. 130.

Hab. Madeira.

Species 192. (Mus. Hanley.)

PUPA FALLAX. *Pup. testâ oblongo-ovatâ, fuscâ, lævi, subacuminatâ; anfractibus senis; aperturâ ovatâ, edentulâ.*

THE DECEPTIVE PUPA. Shell oblong-ovate, brown, smooth, a little acuminated; whorls six; aperture ovate, toothless.

SAY. Pfr. Mon. Hel. II. p. 309.

Bulimus exiguus. Reeve.

Hab. N. America.

Pupa *Lapidaria* and Pupa *Variabilis* having been inadvertently repeated, the two following species take their numbers.

Species 152. (Fig. 152,* Plate XX., Mus. Brit.)

PUPA PYGMÆA. *Pup. testâ minutâ, brevissimè cylindricâ, ventricosâ, lævi; anfractibus quaternis aut quinis; aperturâ subovatâ, margine albo sexdentato.*

THE PYGMY PUPA. Shell minute, very shortly cylindrical, ventricose, smooth; whorls four or five; aperture subovate, margin white, six-toothed.

DRAPARNAUD. 'Tab. des Mollusques de France.'

Pupa quinque-dentata. Hartman.

Vertigo alpestris. Ferrussac.

Hab. Britain and Central Europe.

Species 32. (Fig. 32,* Plate XX. Mus. Brit.)

PUPA ANGLICA. *Pup. testâ minutâ, corneâ, subpyramidatâ, lævi; anfractibus senis; aperturâ subtrigonâ, intùs plicatâ, margine albo, labio externo suprà medium sinuatim incrassato; plicâ suturali parvo.*

THE ANGLICAN PUPA. Shell minute, horny, somewhat pyramidal, smooth; whorls six; aperture subtrigonal, plaited within, margin white, outer lip sinuously thickened above the middle; sutural plait small.

FERRUSSAC —— ?

Hab. Britain and other parts of Europe.

Errata.—For SEPTEMDENTATUS (Species 118), read RINGENS, *Sowerby*.

For VARIABILIS (Species 32), read MULTIDENTATA, *Olivier*.

PUPA.

	Plate.	Species.
acutula, *Parreys*	XIII.	115
alpicola, *Charpentier*	XII.	107
alvearea, *Dillwyn*	III.	23
anconostoma, *Lowe*	XII.	108
anglica, *Ferrussac*	XX.	32*
angustior, *Jeffreys*	XIX.	175
antivertigo, Draparnaud	XX.	183
Antonii, *Küster*	II.	9
Arigonis, *Rossmässler*	XI.	97
armifera, *Say*	XV.	138
avanica, *Benson*	VII.	60
avena, Draparnaud	VIII.	70
avenacea, *Bruguière*	VIII.	70
bacillus, *Pfeiffer*	IX.	80
Badia (muscorum)	IX.	77
Barclayi, *H. Adams*	XVI.	146
bathyodon, *Benson*	IV.	33
Bergerii, *Rothman*	V.	37
bicallosus ? Irw.	X.	87
bicolor, *Hutton*	XVI.	148
bidentata, Pfeiffer	IX.	77
bifilaris, *Mousson*	X.	90
bigranata, *Rossmässler*	XVII.	159
biplicata, Rossmässler	XIII.	130
Blanfordi, *Austin*	IV.	30
Borealis, *Morelet*	XVII.	155
Bourguignati, *Deshayes*	XIV.	128
Bryanti, *Pfeiffer*	I.	1
calathiscus, *Lowe*	XIII.	121
callifera, *Morelet*	IX.	78
capitata, *Gould ?*	XIX.	177
carinata, Gould	VIII.	66
caspia, *Pfeiffer*	XI.	95
cassida, *Lowe*	XV.	137
cernica, *A. Adams*	XVI.	149
Ceylonica, *Pfeiffer*	XVI.	145
Charpentieri, *Shuttleworth*	XII.	109
Chloris, *Crosse*	VIII.	73
chrysalis, *Pfeiffer*	I.	5
clavatula, *Lamarck*	IX.	82
concamerata, Wood	V.	41
concinna, *Lowe*	XV.	139
conica, *Rossmässler*	XI.	101
contracta, *Gulman*	VIII.	67
coronata, Stüder	XI.	102
corticaria, *Say*	XII.	106
critica, Zellius	XI.	102
crassilabris, *Shuttleworth*	II.	14
cupa, *Küster*	XVII.	161
curta, Potiez	V.	44
curvidens, Gould	XV.	140
cyclostoma, *Küster*	XIX.	179
cylindrelloidea, *Stolickza*	VII.	64
cylindrellus, *Adams*	XIII.	122
cylindrica, Stüder	IV.	25
dealbata, *Webbs*	VI.	52
decora, *Gould*	XVIII.	165
decumana, Poey	II.	11
Deshayesii, *Adams ?*	XX.	188
Desmazuresi, *Crosse*	X.	91
detrita, *Shuttleworth*	III.	17
doliolum, *Bruguière*	XI.	102
dolium, *Draparnaud*	VII.	55
Dormeyeri, *Parreys ?*	XX.	189
Dupontiana, Crosse	VIII.	71
Dussumeria, *Reeve*	IX.	84
edentula, *Draparnaud*	XVIII.	172
elata, *Schmidt*	V.	39
elegantula, *Pfeiffer*	XIX.	174
exigua, Mousson	VIII.	69
exiguus, Reeve	XX.	192
Fabreana, *Crosse*	IX.	85
fallax, *Say*	XX.	192
Fanalensis, Lowe	XII.	108
farinesii, *Desmarest*	XVII.	157
fartoides, *Theobald*	IV.	26
ferraria, *Lowe*	XV.	134
Ferrarii, *Porro*	XIV.	130
filosa, *Theobald*	VII.	59
fonticola, Deshayes	XIX.	182
frumentum, *Draparnaud*	V.	44
funicula, *Valenciennes*	XIX.	178
furtoides, *Theobald*	IV.	26
fusca, *Lowe*	XX.	191

	Plate.	Species.
fusus, Bruguière	III.	23
glans, *Küster*	I.	2
Gonidomus, Adams	V.	38
Gouldii, *Binney*	XII.	105
granum, *Draparnaud*	XVII.	156
gularis, *Rossmässler*	VI.	46
guttula, Porro	XIII.	130
hamata, Held	XIX.	175
holostoma, *Morelet*	IX.	83
hordeum, Ferrussac	VIII.	70
idolum, Mentze	V.	41
incrassata, *Sowerby*	I.	6
indica, *Pfeiffer*	VII.	63
infanda, *Shuttleworth*	II.	11
intersecta, *Deshayes*	XIV.	129
iostoma, *Pfeiffer*	III.	22
irrigua, *Lowe*	XVIII.	171
juniperi, Fleming	IV.	25
Kokielii, *Rossmässler*	VIII.	65
Kurrii, *Krauss*	XIX.	182
Küsteri, Pfeiffer	XIX.	179
lachryma, *Auct.*	XIX.	180
Layardi, *Benson*	XV.	141
lapidaria (pygmæa)	XX.	152
lapidaria, *Hutton*	XVI.	147
Lienardiana, *Crosse*	X.	94
Lieversi, *Mousson*	IV.	29
Lifouana, *Gassies*	IV.	28
Lincolnensis, *Cox*	XI.	104
longurio, *Crosse*	XI.	96
Lusitanica, *Rossmässler*	XII.	113
Lyonetii, *Montfort*	IX.	81
Lyonetianus, Pfeiffer	IX.	81
Marginata, Draparnaud	IX.	77
Mariei, *Crosse*	IV.	31
maritima, *Pfeiffer*	III.	20
marmorata, *Pfeiffer*	II.	10
Martensii, *Weinland*	II.	15
Martiniana, *Küster*	II.	16
megachilos, Albers	XI.	97
Menkeana, *Pfeiffer*	XIX.	176
metablita, *Crosse*	VIII.	71
microstoma, *Pfeiffer*	II.	8
microtragus, *Parreys*	V.	35
millium, *Gould*	XVIII.	164
mimula, *Benson*	VII.	61
minutissima, *Hartman*	XVIII.	163
modesta, *A. Adams*	XII.	114
modiolus, *Ferrussac*	VI.	54
modica, *Gould*	XX.	184
molita, Gould	XVI.	148
Mondrainii, *Adams*	XIV.	127
monticola, *Lowe*	XVIII.	168
Moricandi, Fer	VIII.	65
Moulinsiana, Dupuy	XII.	109
Muhlfeldti, *Küster*	VIII.	68
multicostata, *Küster*	II.	13
multidentata, Olivier	V.	42
mumia, *Bruguière*	I.	3
muniola ? Pfeiffer	I.	3
muscerda, *Benson*	VII.	56
muscorum, *Linnæus*	IX.	77
mutabilis, Ferrussac	V.	42
Newtoni, *Adams*	VI.	51
niso, Pfeiffer	VI.	53
nitens, *Pease*	XVII.	162
nitida, *Antonelli*	XVII.	154
Novazelandica, *Pfeiffer*	XIV.	126
nucifraga, *Parreys*	X.	93
oblongata, Rossmässler	XII.	111
obscura, Muhlfeldt	VIII.	68
obstructa, *Gassies*	IV.	34
octodentata, Hartman	XX.	183
ovularis, *Olivier*	XIII.	117
pachygastra, *Zeigler*	XII.	111
pagoda, *Ferrussac*	V.	41
pagodula, *Desmarest*	XI.	98
Paitensis, *Crosse*	X.	88
palanga, *Lesson*	VI.	48
palangula, Ferrussac	XIX.	181
pamphorodon, *Benson*	XIII.	120
pellucida, *Pfeiffer*	XII.	110
pentodon, *Say*	XV.	140
phasianus, *Dubois*	IV.	27
Philippii, *Cantraine*	VIII.	69
Pirreei, *Pfeiffer*	XVI.	143
planguncula, *Benson*	VII.	57
Planti, *Pfeiffer*	XVIII.	169
plicidens, *Benson*	XVI.	151
polyodon, *Draparnaud*	X.	92
Pottebergensis, *Krauss*	XVIII.	166
procera, *Gould*	VIII.	66
producta, *Adams*	XIII.	119
proteus, *Gundlach*	I.	4
pupula, *Deshayes*	XIV.	132
pusilla, *Müller*	XX.	186
pygmæa, *Draparnaud*	XX.	152*
quadridens, *Müller*	V.	40
quinquedentata, *Born*	VI.	49
quinquelamellata, Risso	V.	43

	Plate.	Species.
quinqueplicata, Mühlfeldt	VIII.	68
qularis, *Rossmässler*	VI.	46
Raymondi, Bourgainville	X.	87
recta, *Lowe*	XVIII.	167
rhodia, *Pfeiffer*	XIII.	115
ringens, *Sowerby*	XIII.	118
ringicula, Michaud	X.	92
Rodriguezensis, *Crosse*	VIII.	72
Rossmässleri, *Schmidt*	XIV.	124
Rowellii, *Newcomb*	XVII.	160
rubicunda, Mentse	III.	23
rudis, *Pfeiffer*	III.	21
rupestris, *Philippi*	XI.	103
rupicola, *Say*	IX.	75
Rüsei, Adams	XII.	110
Sagraiana, *Pfeiffer*	III.	19
Salemanensis, *Blanford*	VII.	62
Salwiniana, *Theobald*	XVI.	150
Saulceyi, *Bourgainville*	X.	86
saxicola, *Lowe*	XVIII.	170
scalarina, *Gundlach*	XVII.	153
scapus, *Parreys*	X.	87
sculpta, *Benson*	VII.	58
secale, *Draparnaud*	IV.	25
seductilis, *Zeigler*	VI.	53
septemdentata, *Rothman*	VI.	45
septemdentata (ringens)	XIII.	118
servilis, Gould	XII.	110
Shuttleworthii, *Albers*	XV.	142
Sieversi, *Mousson*	IV.	29
signata, *Mousson*	X.	89
similis, Bruguière	V.	43
simplex, *Gould*	IX.	76
sinnata, *Mousson*	VIII.	74
sphinctostoma, *Lowe*	XV.	136
spinosa, Ferrussac	XI.	102
spreta, *Reeve*	VI.	50
steuophylis, *Benson*	XIV.	125
Strangei, *Pfeiffer*	XI.	100
striatella, *Ferrussac*	III.	18
striaticostata, *Morelet*	XIII.	120
substriata, *Gray*	XX.	183
sulcata, *Bruguière*	V.	38
tantilla, *Gould*	XIX.	173
Tappaniana, Mard.	XV.	140
teres, *Pfeiffer*	XIX.	181
tricolor, *Villa*—?	XX.	190
tricuspis, *Rossmässler*	V.	36
tridens, *Müller*	VI.	47
truncatella, *Pfeiffer*	XVII.	158
tumida	I.	6
turgidula, *Deshayes*	XIV.	133
umbilicata, De Paiva	XII.	108
unidentata, *Pfeiffer*	IX.	77
uva, *Linnæus*	I.	7
uvula, *Deshayes*	XIII.	116
vara, *Benson*	XVI.	144
variabilis, *Draparnaud*	V.	42
variabilis (multidentata)	XII.	112
Venetzii, Charpentier	XIX.	175
ventricosa, *Adams*	XIV.	131
ventrosa, Heynem	XII.	109
versipellis, *Ferrussac*	IX.	79
vertigo, *Draparnaud*	XX.	186
Villæ, *Charpentier*	XI.	99
villosula, Kokiel	XI.	102
vincta, *Lowe*	XV.	135
Walbergi, *Pfeiffer*	XX.	187
Weinlandi, *Kurr*	III.	24
Zebra, *Weinland*	II.	12

MONOGRAPH

OF THE GENUS

VANIKORO.

"Nature, enchanting Nature, in whose form
And lineaments divine I trace a hand
That errs not."—*Cowper.*

1. a.

2.

3.

1. b.

4.

5

6.

7. a.

7. b.

a. 8 b.

Sowerby del et lith

Vincent Brooks Day & Son. Imp.

VANIKORO.

PLATE I.

Genus VANIKORO, *Quoy et Gaimard.*

Testa subglobosa, plerumque alba, cancellata vel decussata, epidermide tenui induta, perforata, umbilicata, umbilico in canalem desinenti; margine aperturæ simplici. Operculum corneum unguiculatum, non-spirale.

Shell subglobose, generally white, cancellated or decussated, covered with a thin epidermis, perforated, umbilicus ending in a canal; margin of the aperture simple. Operculum horny, unguiculate, non-spiral.

Synonyma. MERRIA, Gray. WARICA, Recluz.

The greater part of the species now known were described by Recluz in the Proceedings of the Zoological Society for 1843, many of them being from specimens in the late Mr. Cuming's collection. A few species have been subsequently discovered. The home of the genus seems to be the Pacific, particularly southwards.

Species 1. (Fig. *a*, *b*, Mus. Brit.)

VANIKORO CANCELLATA. *Van. testâ latâ, patulâ, crassiùsculâ, costis concentricis obliquis, sublaminatis, extantibus et liris tenuibus spiralibus cancellatâ; aperturâ latâ, columellâ arcuatâ, canali angustato, elongato; spirâ brevissimâ, depressâ, epidermide croceâ.*

THE CANCELLATED VANIKORO. Shell broad patulate, rather thick, cancellated with oblique, rather laminar outstanding concentric ribs and thin spiral ridges; aperture broad, columella arched, canal narrow, elongated; spire very short, depressed; epidermis saffron.

QUOY ET GAIMARD. Voyage de l'Astrolabe.

Narica Quoyi, Recluz.

Hab. Vanikoro, S. Pacific.

In this species the oblique ribs are rather laminated in form, and rise to angular ridges in the most prominent parts. The colour of the epidermis is bright saffron on the younger specimens.

Species 2. (Mus. Brit.)

VANIKORO GUERINIANA. *Van. testâ brevi, crassâ, latâ; costis distantibus, crassis, perobliquis, et striis spiralibus cancellatâ; aperturâ latâ, declivi; canali obliquè rectiùsculo, canali lato, semilunari.*

GUERIN'S VANIKORO. Shell short, thick, broad, cancellated with distant, thick, very oblique ribs and spiral striæ; aperture broad, sloped downwards; canal obliquely nearly straight, canal broad, semilunar.

RECLUZ, Proc. Zool. Soc., 1843.

Hab. Isl. of Capul, Philippines.

The ribs are broad, thick, and distant.

Species 3. (Mus. Brit.)

VANIKORO PLICATA. *Van. testâ globosâ, tenuiùsculâ, costis numerosis tenuibus et striis spiralibus sculptâ; apice subacuminato; canali semilunari; columellâ rectiùsculâ.*

THE PLAITED VANIKORO. Shell globose, rather thin, sculptured with numerous thin ribs and spiral striæ; apex rather acuminated; canal semilunar; columella rather straight.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Isl. Ticao.

Species 4. (Mus. Brit.)

VANIKORO CIDARIS. *Van. testâ rotundâ, crassâ, costis latis, subdistantibus et striis spiralibus sculptâ; spirâ depressâ, acuminatâ; aperturâ magnâ, canali moderatè angustatâ, columellâ rectiùsculâ.*

THE CIDARIS VANIKORO. Shell rounded, thick, sculptured with broad, rather distant ribs and spiral striæ; spire depressed, acuminated; aperture large, canal moderately narrow, columella rather straight.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Isl. Masbate, Philippines.

Species 5. (Mus. Brit.)

VANIKORO PETITIANA. *Van. testâ globosâ tenuiùsculâ, costis numerosis, concentricis versùs marginem subevanidis et liris tenuibus, acutis, spiralibus sculptâ; spirâ acuminatâ, anfractibus rotundis, distinctis, ultimo maximo; canali angusto; aperturâ latâ.*

PETIT'S VANIKORO. Shell globose, rather thin, sculptured with numerous concentric ribs becoming obsolete towards the margin and thin, sharp spiral ridges; spire acuminated, whorls rounded, distinct, last very large; canal narrow; aperture broad.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Philippines.

Species 6. (Mus. Brit.)

VANIKORO LIGATA. *Van. testâ crassiùsculâ, globosâ, costis elevatis, obliquis, crassis, concentricis, liris tenuibus ligatis sculptâ; spirâ depressâ, canali angustissimo, columellâ arcuatâ.*

THE CONNECTED VANIKORO. Shell rather thick, globose, sculptured with raised, oblique, thick, concentric ribs united by thin spiral ridges; spire depressed, canal vey narrow; columella arched.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Seychelles Islands.

Species 7. (Fig. *a*, *b*, Mus. Brit.)

VANIKORO CUMINGIANA. *Van. testâ depressâ, crassâ, angulatâ, carinis magnis spiralibus et striis foveolatis concentricis sculptâ; spirâ brevi, anfractibus minutis, angulatis; aperturâ subrotundâ; canali lato.*

CUMING'S VANIKORO. Shell depressed, thick, narrow, sculptured with large spiral keels, and pitted concentric striæ; spire short, whorls minute, angular; aperture rather rounded; canal broad.

RECLUZ. Proc. Zool. Soc., 1843.

Narica tricarinata, Recluz.

Hab. —— ?

The *Narica tricarinata* appears to be only a depressed variety.

Species 8. (Fig. *a*, *b*, Mus. Brit.)

VANIKORO RUGATA. *Van. testâ elevatâ, crassâ, spirâ acuminatâ anfractibus, superioribus crassi-costatis, interstitiis profundè foveolatis, ultimo anfractu leviter sculpto; aperturâ semilunari; canali lato, columellâ rectiùsculâ.*

THE WRINKLED VANIKORO. Shell elevated, thick, spire acuminated, upper whorls thick-ribbed, with deeply pitted interstices; last whorl lightly sculptured, aperture semilunar; canal broad, columella rather straight.

A. ADAMS. MS. Cum. Coll.

Hab. —— ?

The cancellations of the upper whorls are very deeply pitted, but they become almost obsolete towards the back and margin of the last whorl.

9.

10. a.

10. b.

11.

12. a.

12. b.

a. 13. b.

14.

15.

16.

Sowerby, del et lith

Vincent Brooks Day & Son, Imp.

VANIKORO.

PLATE II.

Species 9. (Mus. Brit.)

VANIKORO GAIMARDI. *Van. testâ parvâ, costis paucis, distantibus spiralibus et liris concentricis profundè et latè cancellatâ; spirâ elevatâ, acuminatâ; aperturâ subrotundâ; canali angusto, profundo.*

GAIMARD'S VANIKORO. Shell small, deeply and broadly cancellated with few distant spiral ribs and concentric ridges; spire elevated, acuminated; aperture rather rounded; canal narrow, deep.

ADAMS. MS. Cum. Coll.

Vanikoro Quoyi, Adams, non Recluz.

Hab. ——?

Species 10. (Fig. *a*, *b*, Mus. Brit.)

VANIKORO CUVIERIANA. *Van. testâ subpatulâ, depressâ, tenui, tenuiter spiraliter et concentricè liratâ; spirâ depressâ, acuminatâ, anfractu ultimo supernè subdepresso; aperturâ obliquè ovatâ, canali latissimo, columellâ tenui, obliquè subarcuatâ.*

CUVIER'S VANIKORO. Shell rather patulate, depressed, thin, finely spirally and concentrically ridged; spire depressed, acuminated, last whorl rather depressed above; aperture obliquely ovate, canal very broad, columella thin, a little obliquely arched.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. ——?

A more finely sculptured shell than most of the other species.

Species 11. (Mus. Brit.)

VANIKORO SOULEYETIANA. *Van. testâ globosâ, tenuiter spiraliter et concentricè sculptâ; spirâ parvâ, acuminatâ, ultimo anfractu rotundo; aperturâ subrotundâ; columellâ rectâ, canali brevi, angusto.*

SOULEYET'S VANIKORO. Shell globose, finely spirally and concentrically sculptured; spire small, acuminated, last whorl rounded; aperture rather rounded; columella straight, canal short, narrow.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. ——?

Originally described from a specimen in Mr. Cuming's collection—locality unknown.

Species 12. (Fig. *a*, *b*, Mus. Brit.)

VANIKORO DESHAYESIANA. *Van. testâ globosâ, tenui, spirâ acuminatâ; anfractibus superioribu scancellatis, ultimo anfractu tenuiter spiraliter striato, leviter concentricè costatâ; costis striisque versùs marginem ferè evanidis; aperturâ subrotundâ, columellâ leviter arcuatâ; canali latiùsculo.*

DESHAYES' VANIKORO. Shell globose, thin, spire acuminated; upper whorls cancellated, last whorl finely spirally striated, lightly concentrically ribbed; ribs and striæ almost obsolete towards the margin; aperture rather rounded, columella slightly arched; canal rather broad.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Isl. Zebu, Philippines.

In some specimens the sculpture almost disappears towards the back of the last whorl.

Species 13. (Fig. *a*, *b*, Mus. Brit.)

VANIKORO DISTANS. *Van. testâ parvâ, elatâ, distantissimè concentricè costatâ, spiraliter tenuiter striatâ; spirâ elevatâ, acuminatâ; aperturâ semilunari, obliquâ; canali lato, semilunari.*

THE DISTANT VANIKORO. Shell small, elevated, very distantly concentrically ribbed, spirally finely striated; spire elevated, acuminated; aperture semilunar, oblique; canal broad, semilunar.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Isl. Bohol, Philippines.

Species 14. (Mus. Brit.)

VANIKORO CLATHRATA. *Van. testâ rotundo-subdepressâ; crassâ, subæqualiter cancellatâ; aperturâ obliquâ; columellâ rectiùsculâ, canali latissimo; spirâ acuminatâ, profundè foveolatâ.*

THE LATTICED VANIKORO. Shell roundly subdepressed, thick, rather equally cancellated; aperture oblique; columella rather straight, canal very broad; spire acuminated, deeply pitted.

RECLUZ. Proc. Zool. Soc., 1843.

Natica striata, D'Orbigny.

Natica margaritacea, Potiez.

Natica sigaretiformis, Potiez.

Hab. ——?

Species 15. (Mus. Brit.)

VANIKORO ROSEA. *Van. testâ parvâ, patulâ, roseâ, striis spiralibus et costis concentricis obliquis cancellatâ; aperturâ semilunari, columellâ rectiùsculâ; canali latissimo.*

THE PINK VANIKORO. Shell small, patulous, pink, cancellated with spiral striæ and concentric oblique ribs; aperture semilunar, columella rather straight; canal very broad.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Moluccas.

The only species showing any genuine colour in the shell itself.

Species 16. (Mus. Brit.)

VANIKORO GRANULOSA. *Van. testâ globosâ, costis spiralibus moniliformibus sculptâ; spirâ elevatâ; aperturâ semilunari; columellâ tenui; canali latissimo, complanato.*

THE GRANULATED VANIKORO. Shell globose, sculptured with beaded spiral ribs; spire elevated; aperture semilunar; columella thin; canal very broad, flat.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. New Holland.

The spiral sculpture decidedly predominates in this species in the form of beaded ribs.

17.

18 a.

18. b.

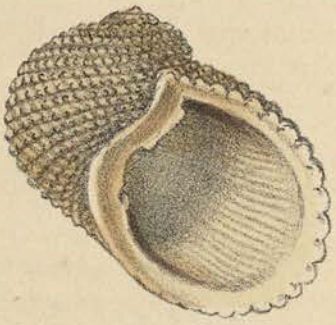
19.

a.

20 b.

a.

21. b.



Neritopsis.

22.

23.

a.

24. b.

Sowerby del et lith

Vincent Brooks Day & Son, Imp.

VANIKORO AND NERITOPSIS.

PLATE III.

Species 17. (Mus. Brit.)

VANIKORO IMBRICATA. *Van. testâ parvâ, tenui, obliquâ, tenuiter spiraliter et concentricè striatâ; spirâ elevatâ, acuminatâ; aperturâ angustè ovatâ, obliquè productâ, canali maximo, semirotundo.*

THE IMBRICATED VANIKORO. Shell small, thin, oblique, finely spirally and concentrically striated; spire raised, acuminated; aperture narrowly ovate, obliquely produced, canal very large, half-rounded.

PEASE. MS.

Hab. Islands in the Pacific.

Species 18. (Fig. *a*, *b*, Mus. Brit.)

VANIKORO RECLUZIANA. *Van. testâ elatâ, acuminatâ, spirâ cancellatâ, ultimo anfractu ferè lævigato; aperturâ semicirculari, columellâ rectiùsculâ; canali elongato, latiùsculo.*

RECLUZ'S VANIKORO. Shell elevated, acuminated, spire cancellated, last whorl almost smooth; aperture semicircular, columella nearly straight; canal elongated, rather broad.

ADAMS AND ANGUS. Proc. Zool. Soc., 1867, p. 212.

Hab. New South Wales.

The early whorls are strongly cancellated, but the body whorl becomes nearly smooth.

Species 19. (Mus. Brit.)

VANIKORO HELICOIDEA. *Van. testâ subrotundâ, eleganter costatâ, interstitiis spiraliter depresso-striatâ; spirâ depressâ; aperturâ magnâ, ovatâ; columellâ tenui, rectiùsculâ; canali brevi, semilunari.*

THE SNAIL-SHAPED VANIKORO. Shell rather rounded, elegantly ribbed, interstices spirally depressed-striated; spire depressed; aperture large, ovate; columella thin, rather straight; canal short, semilunar.

LE GUILLON. Recluz, Proc. Zool. Soc., 1843.

Hab. —— ?

Species 20. (Fig. *a*, *b*, Mus. Brit.)

VANIKORO SOLIDA. *Van. testâ solidâ, globosâ, spirâ prominenti, anfractibus superioribus cancellatis, rotundis, ultimo anfractu tenuiter spiraliter et concentricè striato; aperturâ magnâ, columellâ tortuâ; canali angusto.*

THE SOLID VANIKORO. Shell solid, globose, spire prominent, upper whorls cancellated, rounded, last whorl finely spirally and concentrically striated; aperture large, columella tortuous, canal narrow.

SOWERBY.

Hab. —— ?

Species 21. (Fig. *a*, *b*, Mus. Brit.)

VANIKORO ACUTA. *Van. testâ altiùsculâ, tenui, semipellucidâ, tenuiter decussatâ; spirâ acuminatâ, anfractibus prominulis; aperturâ subovatâ, columellâ rectâ, canali lato, planulato.*

THE ACUTE VANIKORO. Shell rather elevated, thin, semipellucid, finely decussated; spire acuminated, whorls rather prominent; aperture subovate, columella straight, canal broad, flattened.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. —— ?

More finely decussated than most of the species, with sharp spire and thin substance.

Species 22. (Mus. Brit.)

VANIKORO SEMIPLICATA. *Van. testâ globosâ, tenuiùsculâ, tenuiter decussatâ; ultimo anfractu suprà suturam aperturâ elevatâ; anfractibus apicalibus minutis;*

aperturâ semirotundâ; columellâ tenui, rectiùsculâ; canali elongato, angusto.

THE HALF-PLAITED VANIKORO. Shell globose, rather thin, finely decussated; last whorl raised above the suture of the aperture; apical whorls minute; aperture half-round; columella thin, rather straight; canal long, narrow.

PEASE ——? MS. in Cuming's Collection.

Hab. South Seas.

Species 23. (Mus. Brit.)

VANIKORO ELATA. *Van. testâ altâ, tenui, tenuissimè decussatâ; spirâ elevatâ, acuminatâ, anfractibus prominentibus; aperturâ breviùsculâ, subpyriformi; columellâ brevi, leviter arcuatâ, canali brevi, angustissimo.*

THE ELEVATED VANIKORO. Shell elevated, thin, very finely decussated; spire elevated, acuminated, whorls prominent; aperture rather short, rather pyriform; columella short, slightly arched, canal short, very narrow.

SOWERBY.

Hab. China Seas.

Much more elevated than *Vanikoro acuta*, and with a narrow canal.

Species 24. (Fig. *a*, *b*, Mus. Brit.)

VANIKORO SEMISOLUTA. *Van. testâ altâ, angustâ, spiraliter costis moniliformibus, et concentricè striis tenuibus sculptâ; spirâ elevatâ, acuminatâ; ultimo anfractu suprà suturam perelevato; aperturâ declivi, angustè auriformi, ad suturam vix convexâ, canali elongato, latiùsculo.*

THE HALF-UNCOILED VANIKORO. Shell elevated, narrow, sculptured spirally with beaded ribs, and concentrically with thin striæ; spire elevated, acuminated; last whorl raised high above the suture; aperture sloped downwards, narrowly auriform, scarcely connected at the suture, canal elongated, rather broad.

SOWERBY.

Hab. East Indies.

Owing to the fall of the aperture and the comparative distinctness of the canal, the outer and inner lips seem scarcely to touch the body-whorl.

NERITOPSIS.

Genus NERITOPSIS, *Gratelcoupe.*

Testa subglobosa, spiraliter granoso-costata; spira brevi, apertura magna; labio interno crasso, planulato, medio quadratim emarginato; labio externo intùs incrassato. Operculum crassum, testaceum, non-spirale.

Shell subglobose, spirally granulately ribbed; spire short, aperture large; inner lip thick, flattened, with a square notch in the middle; outer lip thickened within. Operculum thick, shelly, not spiral.

Syn. RADULA, Gray, not Klein.

As yet the *Neritopsis radula* from the Pacific is the only recent species known, although there are many fossil ones. The operculum formerly unknown, and supposed to be thin and horny, has been recently figured in the Zoological Proceedings and described by Mr. Henry Adams. It is thick and shelly, with a square projection to fit the notch in the columella of the shell.

Species. (Mus. Sowerby.)

NERITOPSIS RADULA. *Ner. testâ obliquè ovatâ, crassâ; costis crassis moniliformibus spiralibus sculptâ; interstitiis angustis, foveolatis; aperturâ obliquâ, margine externo laqueato.*

THE ROOT NERITOPSIS. Shell obliquely ovate, thick; sculptured with thick beaded, spiral ribs; interstices narrow, pitted; aperture oblique, outer margin fluted.

LINNÆUS (*Nerita*). Syst. Nat.

Hab. Ceylon.

MONOGRAPH

OF THE GENUS

KUPHUS.

"All worlds, all nature, mood and measure keep
For praise and ceaseless gratulation poured
Into the ear of God—their Lord."—*Wordsworth.*

1.a.

2.b

1.b.

1.a.

2.a.

Sowerby del. et lith.

Vincent Brooks, Day & Son, Imp.

KUPHUS.

Genus KUPHUS, *Gutteard* (Cyphus).

Molluscum arenicolum. Tuba magna alba, rugosa, subannulata, posticè attenuata, intùs in tubas duabus divisa, laminis septiformibus transversis concamerata. Valvæ ignotæ. Palmuli compressores testacei, deltoides.

Mollusc, sand-burrowing. Tube large, white, rough, slightly ringed, posteriorly attenuated, divided interiorly into two tubes, chambered transversely with septiform laminæ. Valves unknown, compressor palmlets shelly, deltoid.

Syn. Furcella, *Oken.* Septaria, *Lamarck.*

The gigantic tube of this Mollusc in its anterior duplicate opening, its inner transverse septa, and its white, roughened, and irregularly annulated surface, is so exactly like a magnified representation of the tube of a Teredo as to leave little doubt as to the nature of the animal and its affinity with the genus *Teredo*. At the same time it can hardly be included in that genus, the valves having never been seen, and it being certain that the animal does not bore like the Teredines.

Species 1. (Mus. Brit.)

KUPHUS GIGANTEA. *Kup. testâ maximâ, tubâ elongatâ, rugosâ posticè attenuatâ, divisâ, anticè latè apertâ; valvulis et palmulis compressoribus ignotis.*

THE GIGANTIC KUPHUS. Shell very large; tube elongated, rugose, posteriorly attenuated, divided, anteriorly broadly open; valves and compressor palmlets unknown.

LINNÆUS (*Serpula*). Systema Naturæ.

Septaria arenaria, Lamarck.

Although not yet discovered, there can be little doubt but that valves of some kind exist. It is only barely possible that they may become absorbed. The tube, of which fig. *b* represents the end portion, is about three and a half feet long.

Species 2. (Fig. *a*, *b*, *c*, Mus. Brit.)

KUPHUS CLAUSA. *Kup. testâ magnâ; tubâ tenuiusculâ anticè divisâ, attenuatâ, concameratâ; posticè margine rotundatim inflexo superlaminato clausâ; valvulis ignotis; palmulis compressoribus testaceis, æqualibus, anticè styliformibus, posticè deltoides.*

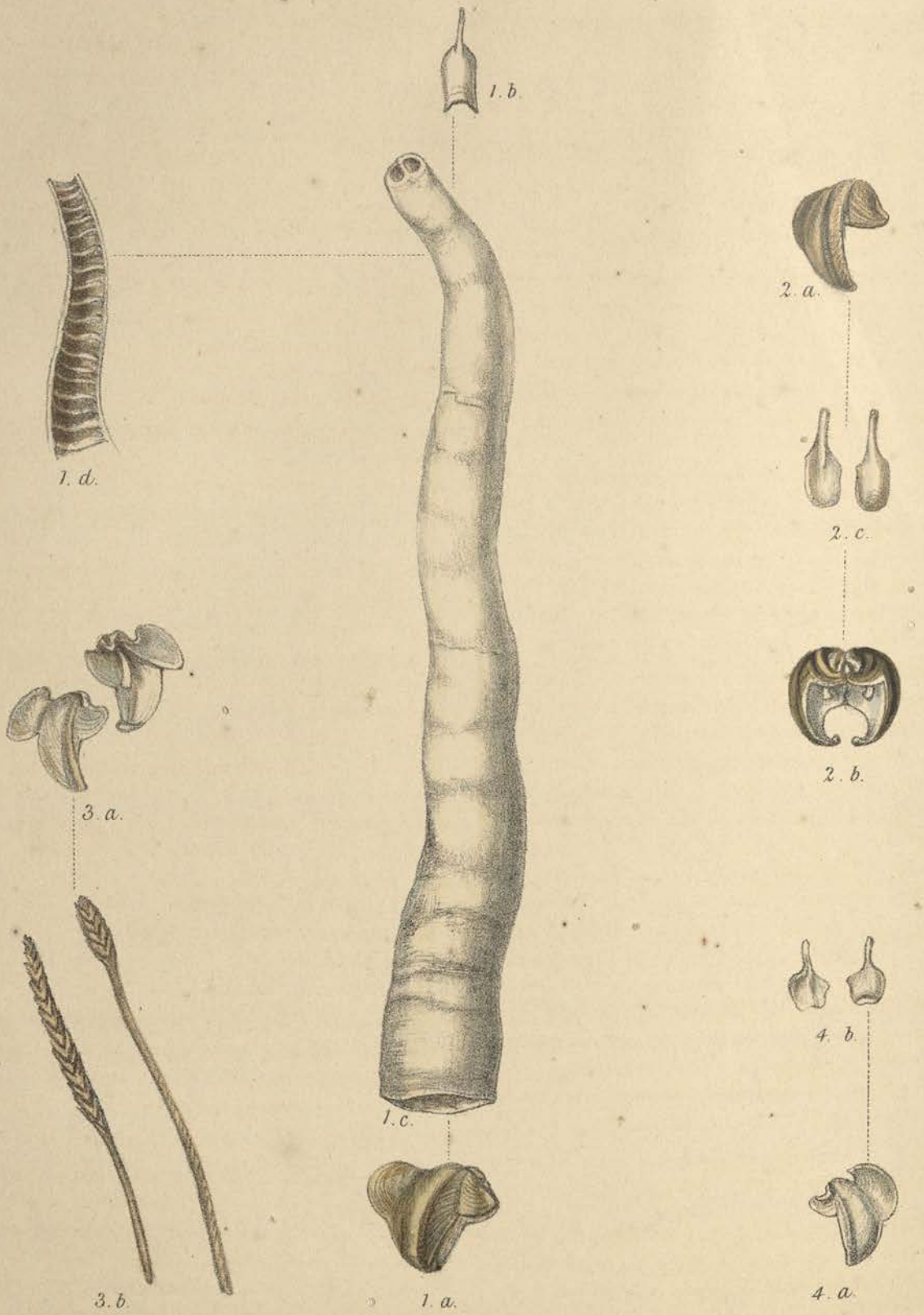
THE CLOSED KUPHUS. Shell large; tube rather thin, anteriorly divided, attenuated, chambered, posteriorly closed by the roundly-inflected, superlaminated margin; valves unknown; compressor palmlets shelly, equal, anteriorly styliform, posteriorly deltoid.

SOWERBY.

Hab. —— ?

The end of the tube, which in the British Museum specimen is about fifteen inches long, is closed by the margin being folded inwards so as to meet and overlap across a rounded oval disc. If there were valves they would be enclosed within this termination. I do not know whether they have been sought in the specimen. The specimen in the British Museum is labelled as identical with the well-known *C. arenaria*.

May, 1875.



Sowerby del. et lith.

Vincent Brooks, Day & Son, Imp.

TEREDO.

PLATE I.

Genus TEREDO. *Linnæus.*

Molluscum vermiforme, perforans, tubam testaceam plerumque formans, siphonibus stylorum corneorum vel palmularum testacearum pari munitum. Testa globosa, æquivalvis, anticè angulariter, posticè arcuatim hians; cardine calloso, utrâque valvâ processu subumbonali munitâ. Tubâ ad terminum siphonalem laminis septiformibus frequenter divisâ.

Mollusc worm-shaped, perforating, generally forming a shelly tube; siphons provided with a pair of horny stylets or shelly pallets. Tube divided at the siphonal end by septiform laminæ. Shell globose, equivalve, gaping angularly in front and in a curve behind; hinge callous, provided with a subumbonal process in each valve.

The habits of the Teredos are only too well known wherever they are found. The mischief they do in boring ship's timbers, and destroying breakwaters and piles, causes them to be reckoned among the enemies of industrial mankind. They generally bore in the direction of the grain of the wood, sometimes a little crookedly, but seldom intruding into each other's bores. The shelly tube forms the lining to the hole, and the valves are enclosed at the wider extremity. The pallets or styles are attached near the ends of the siphons, and seem to be used for the purpose of compressing and relaxing them, so as to assist the circulation of the water through the lengthened tubes. The pallets in some species are shelly and spade-shape; in others horny and styliform. These divisions are separated generically by some authors as TEREDO and XYLOPHAGA.

Species 1. (Fig. *a*, *b*, only Mus. Brit.)

TEREDO NAVALIS. *Ter. testâ obliquâ, solidiùsculâ; areis anticis tenuissimè striatis; sulco mediano lirato, areâ posticâ lævigatâ, auriculâ magnâ, rotundâ; tubâ tenuiùsculâ, minimè cameratâ; palmulis testaceis, oblongis, termino concavo-arcuato; stipulâ brevi.*

THE SHIP TEREDO. Shell oblique, rather solid, anterior areas very finely striated; middle sulcus ridged, posterior area smooth, auricle large, round; tube rather thin, not chambered; pallets shelly, oblong, end arched, stem short.

LINNÆUS. Systema Naturæ.

Teredo marinus. Sellius.

Teredo fatalis. Quatrefages?

Hab. British coasts. Piles of Yarmouth Pier. Ramsgate.

Species 2. (Fig. 2, *a*, *b*, *c*; for tube, see Fig. 1, *c*, *d*, Mus. Brit.)

TEREDO NORVEGICA. *Ter. testâ altiùsculâ, solidâ, valdè arcuatâ; sulco mediani profundo; auriculâ angustâ, semirotundâ; palmulis testaceis, oblongis, termino convexo, lateribus declivibus, stipulâ breviùsculâ; tubâ robustâ, concameratâ.*

THE NORWEGIAN TEREDO. Shell rather high, solid, much arched; medial groove deep; auricle narrow, half-round; pallets shelly, oblong, with convex end, sloped sides, and rather short stem; tube robust, chambered.

SPENGLER. Forbes and Hanley, B. Mol. p. 66.

Teredo nigra. Blainville.

Teredo Bruguieri. Delle Chiaje.

Teredo fatalis et T. Deshaii. Quatrefages.

Teredo navium. Sellius.

Hab. British and Northern coasts.

The breadth of the valves, as compared with the height, is less in this species than in the preceding, and the posterior auricle is much narrower.

Species 3. (Fig. *a*, *b*, Mus. Brit.)

TEREDO BIPENNATA. *Ter. testâ altâ, tenuiter striatâ, umbonibus callosis; auriculâ posticâ elevatâ, ad juncturam angustatâ, versus marginem lateralem expansâ, paulò supra umbonem elevatâ; stylis corneis, inæqualibus, articulatis; uno brevi, stipulâ elongatâ, altero elongato, stipulâ breviùsculâ.*

THE BIPENNATE TEREDO. Shell high, finely striated, umboes callous; posterior auricle raised, narrow

at the juncture, expanded towards the lateral margin, raised a little above the umbo; styles horny, unequal, jointed; one short, with long stem; the other long, with rather short stem.

Turton. British Bivalves.

Hab. Ireland, Scarborough, &c.

Species 4. (Fig. *a*, *b*, Mus. Hanley.)

Teredo megotara. *Ter. testâ latâ, rotundatâ, areâ anticâ breviùsculâ, margine dorsali reflexo, recurvo, concavo; auriculâ posticâ latâ, elevatim expansâ, supra umbones recurvâ; palmulis testaceis, brevibus, subquadratis, stipulâ brevi, crassiùsculâ; tubâ articulatâ.*

The expanded Teredo. Shell broad, rounded, anterior area rather short, dorsal margin reflected, recurved, concave; posterior auricle broad, raised, expanded, recurved above the umboes; pallets shelly, short, rather square, stem short, rather thick; tube jointed.

Hanley. Forbes and Hanley, Brit. Moll.

Teredo dilatata. Stimpson.

Teredo nana ? Turton.

Teredo oceani ? Sellius.

Hab. Herne Bay, Devonshire, Swansea.

G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

TEREDO.

PLATE II.

Fig. 1. *d.* Small end of the tube of *Teredo navalis*, showing that it is not chambered. To replace the figure in Plate I.

Fig. 2. *d.* Chambered end of TEREDO NORVEGICA.

Species 5. (Fig. *a*, *b*, *c*, Mus. Brit.)

TEREDO STUTCHBURYI. *Ter. testâ brevi, rotundâ; areâ anticâ parvâ, obtusâ, auriculâ posticâ parvâ, rotundâ; processu subumbonali expanso, validè curvo; stylis corneis, minutè articulatis, lateribus tenuiter spinosis; stipulâ curvâ, tenui.*

STUTCHBURY'S TEREDO. Shell short, rounded; anterior area small, obtuse; posterior auricle small, rounded; subumbonal process expanded, strongly curved; stylets horny, minutely articulated, finely spined at the sides; stem curved, thin.

LEACH. MS. Mus. Brit.

Hab. Sumatra.

Species 6. (Fig. *a*, *b*, *c*, Mus. Brit.)

TEREDO CARINATA. *Ter. testâ altiùsculâ, valdè arcuatâ; auriculâ anticâ expansâ, elevatâ, intùs validissimè carinatâ; stylis corneis, elongatis, tenuibus, stipulâ elongatissimâ.*

THE KEELED TEREDO. Shell rather high, much arched; anterior auricle expanded, raised, very strongly keeled, stylets horny, long, narrow, stem very long.

GRAY. MS. in Brit. Mus.

Hab. Drift-wood in British Channel.

The stylets of *Teredo bipennata* are unequal, one being short, wheat-ear-like, with very long stem, and the other a much longer body with shorter stem. The stylets of *Teredo carinata* seem to differ from both. The valves in the latter are perhaps broader, but the difference is not very certain or obvious.

Species 7. (Fig. *a*, *b*, *c*, Mus. Brit.)

TEREDO MALLEOLUS. *Ter. testâ parvâ, altâ, obliquâ, angustatâ, validissimè arcuatâ, areâ posticâ brevi, angustâ, versus umbonem recurvâ, elevatâ; processu umbonali obliquè curvâ, ad terminum clavatâ; palmulis brevissimis, testaceis, latis, stipulâ brevi, incurvâ.*

THE LITTLE HAMMER TEREDO. Shell small, high, oblique, narrow, very strongly arched; posterior area short, narrow, recurved towards the umbo, raised; umbonal process obliquely curved, club-shaped at the end; pallets very short, shelly, broad, with short stem, bent forwards.

TURTON. Forbes and Hanley. Brit. Moll.

Hab. Torquay.

Species 8. (Fig. *a*, *b*, Mus. Brit.)

TEREDO MEGATHORAX. *Ter. testâ magnâ, solidâ, rotundâ, anticè latissimè hiante, validè arcuatâ, umbonibus rotundis, auriculâ posticâ brevi, rotundâ, margine dorsali paulò elevato; areâ anticâ brevi, areis medianis elongatis, callo terminali magno; processu subumbonali lato.*

THE BIG-CHESTED TEREDO. Shell large, solid, rounded, anteriorly very widely gaping, strongly arched, umboes rounded, posterior auricle short, rounded, dorsal margin a little raised; anterior area short, median areas elongated, with large terminal callus; subumbonal process broad.

GOULD —— ? MS. Mus. Brit.

Hab. N. America.

Species 9. (Fig. *a*, *b*, *c*, Mus. Brit.)

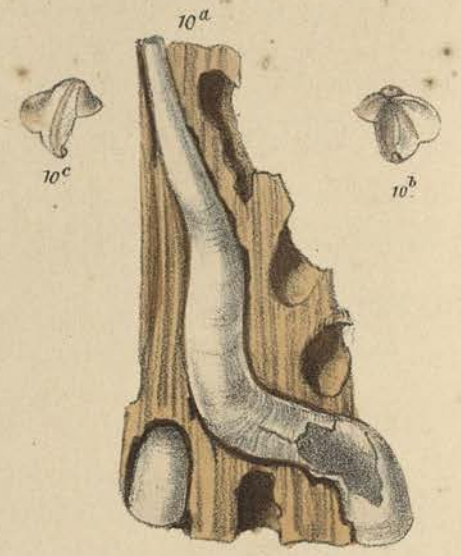
TEREDO CAMPANULATA. *Ter. testâ albâ, latiùsculâ, areâ postico-centrali latâ, sulco mediani lato, lirato; auriculâ posticâ ad juncturam angustatâ, versus marginem lateralem latè expansâ, supernè concavo-arcuatim elevatâ, margine laterali declivi; stylis corneis, elongatis, dimidiatim articulis campanuliformibus utrinque recurvo-spinosis ornatis.*

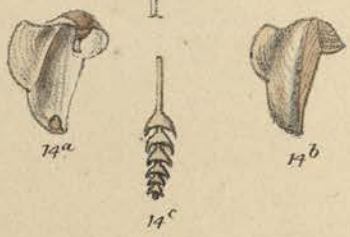
THE CAMPANULATED TEREDO. Shell white, rather broad, posterior-central area broad, middle sulcus broad, ridged; posterior auricle narrowed at the juncture, broadly expanded towards the lateral margin, raised in a concave curve above, lateral margin sloped downwards; stylets horny, elongated, ornamented half-way with bell-shaped joints, having recurved spines on each side.

DESHAYES. MS. Mus. Brit.

Hab. —— ?

The valves resemble those of *Teredo bipennata*, but are much shorter and broader in the continuation of the central areas below the auricle. The greater difference is in the ornamentation of the pallets.





G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

TEREDO.

PLATE III.

Species 10. (Fig. *a*, *b*, *c*, *d*, Mus. Brit.)

TEREDO SAULII. *Ter. testâ subrotundâ, parvâ, areâ anticâ cuneatâ; auriculâ posticâ semirotundâ, elongatâ, margine dorsali declivi, ad junctnram inferiorem moderatè angulatâ, areis centralibus infra auriculam breviùsculis, processu subumbonali ad terminum expanso; tubâ solidiùsculâ, nonnunquam clausâ; stylis corneis, angulatim pinnatis, stipulâ brevi.*

SAUL'S TEREDO. Shell rather round, small, anterior area cuneated; posterior auricle half-round, elongated, dorsal margin sloped, moderately angular at the lower juncture; central areas rather short below the auricle; subumbonal process expanded at the end; tube rather solid, sometimes closed; stylets horny, angularly pinnated; stem short.

WRIGHT. MS. Mus. Brit.

Hab. Callas Bay.

Species 11. (Fig. *a*, *b*, *c*, Mus. Jeffreys.)

TEREDO PEDICILLATA. *Ter. testâ parvâ, altiùsculâ; areâ anticâ breviùsculâ, auriculâ posticâ prominenti, rotundâ; palmulis testaceis, medio quasi-articulatis, termino concavo-arcuato; stipulâ cornea, longâ; tubâ tenui, septis terminalibus paucis.*

THE PEDICLE TEREDO. Shell small, rather high; anterior area rather short, posterior auricle prominent, rounded; pallets shelly, quasi-articulated in the middle, concavely arched; stem horny, long; tube thin, with few terminal septa.

QUATREFAGES. Ann. Nat. Sci. Ser. 3. t. II. p. 26.

Hab. Coasts of Great Britain.

The valves resemble those of *Teredo palmulata*, but the kind of horny joint by which the pallets seem to be divided into two portions shows the distinctness of the species.

Species 12. (Fig. *a*, *b*, *c*, Mus. Brit.)

TEREDO BATAVUS. *Ter. testâ brevi, rotundâ, crassâ; auriculâ posticâ angustâ, margine dorsali declivi; areâ anticâ brevi, obtusâ; umbonibus callosis, incurvis; processu subumbonali curvo, expanso; tuberculo terminali magno; palmulis testaceis, spathulatis, latis, ad latera convexis, ad terminum concavis; stipulâ elongatâ.*

THE BATAVIAN TEREDO. Shell short, rounded, thick; posterior auricle narrow, dorsal margin sloped; anterior area short, obtuse; umboes callous, curved inwards; subumbonal process curved, expanded; terminal tubercle large; pallets shelly, spatulate, broad, convex at the sides, concave at the end; stipula elongated.

SPENGLER —— ? Fid. Mus. Brit.

Hab. Batavia.

This species has been assigned to *Teredo navalis* by some authors, but the valves, as well as the pallets, are very different in form.

Species 13. (Fig. *a*, *b*, *c*, Mus. Deshayes.)

TEREDO AFFINIS. *Ter. testâ parvâ, globosâ, liratostriatâ; areâ anticâ brevi, angustâ; areâ posticomediani latâ; auriculâ posticâ latâ, elongatâ, arcuatim plicatâ; hiatu postico parvo; processu subumbonali tenuissimo, brevi; palmulis minimis, angustis, compressis; supernè corneis, quadripartitis; stipulâ elongatâ.*

THE ALLIED TEREDO. Shell small, globose, ridge-striated; anterior area short, narrow; posteromedial area broad; posterior auricle broad, long, plaited in curves; posterior hiatus small; subumbonal process very thin and rather short; pallets very small, narrow, compressed; horny and quadripartite above; stem elongated.

DESHAYES. Conch. Isl. Bourbon. Pl. XXVIII. Fig. 8–12.

Hab. Ile de la Réunion (Bourbon).

Species 14. (Fig. *a*, *b*, *c*, Mus. Deshayes.)

TEREDO BREVIS. *Ter. testâ parvâ, altâ, tenuiùsculâ, utroque latere valdè aperto, areis distinctis, anticâ granosè-striatis; auriculâ posticâ latâ, eleganter tenui et plicatâ; processu subumbonali brevissimo; palmulis elongatis, articulatis, articulis septem vel octo, infundibuliformibus, gradatim decrescentibus, spinâ coriaceâ utroque latere armatis.*

THE SHORT TEREDO. Shell small, high, rather thin, widely gaping on both sides; areas distinct, anterior granularly striated; posterior auricle broad, elegantly thin and plaited; subumbonal process very short. Pallets elongated, jointed, joints seven or eight, funnel-shaped, gradually decreasing, armed on each side with a coriaceous spine.

DESHAYES. Conch. Isl. Bourbon, Pl. 28, Fig. 4–7.

Hab. Ile de la Réunion (Bourbon).

G.B. Sowerby del et Lith

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TEREDO.

PLATE IV.

Species 15. (Fig. *a*, *b*, *c*, Mus. Brit.).

TEREDO PALMULATA. *Ter. testâ parvâ, rotundâ; auriculâ posticâ et areâ anticâ productis, rotundis, areis centralibus latis, breviùsculis; processu subumbonali curvo, expanso. Stylis corneis, brevibus, spiciformibus, stipulâ longitudine æquali.*

THE PALMULATED TEREDO. Shell small, rounded, posterior auricle and anterior area produced, rounded; central areas broad, rather short; subumbonal process curved, expanded. Styles horny, short wheat-ear-shaped, stem of equal length.

LAMARCK. Anim. sans. Vert.

Teredo minima. Blainville.

Teredo bipalmata. Delle Chiaje.

Teredo Philippii. Fisher.

Hab. Ireland, England, &c. In floating wood.

Species 16. (Fig. *a*, *b*, *c*, Mus. Brit.)

TEREDO SENGALENSIS. *Ter. testâ parvâ; tubâ rugosâ, versus terminum siphonalem attenuatâ; palmulis breviter spathulatis, extùs bicarinatis; stipulâ brevissimâ.*

THE SENEGAL TEREDO. Shell small; tube rough, attenuated towards the siphonal end; pallets shortly spatulate, bicarinated outside, with very short stem.

BLAINVILLE.

Hab. Senegal coasts.

Tubes in wood, and pallets which seem quite distinct in their characters from any other species, are in the British Museum, without any specimens of the valves. The species is referred to *Teredo Norvegica* by Jeffreys.

Species 17. (Fig. *a*, *b*, *c*, Mus. Brit. and Sowb.)

TEREDO NUCIVORA. *Ter. testâ altâ, angustissimâ, tenui, utrinque latissimè apertâ; tubâ contortâ, crassâ, bulbiformi.*

THE NUT-EATING TEREDO. Shell high, very narrow, thin, very widely gaping on both sides; tube contorted, thick, bulb-shaped.

SPENGLER. Desh. Traité élém. Pl. 2, Fig. 9, 10.

Genus *Uperotis.* Guettard.

Guettera nucivora. Gray.

Fistulana gregata. Lamarck.

Teredo gregata. Sowerby.

Hab. Isl. of France.

This species pierces its way through the shells of floating cocoa-nuts, and forms its contorted bottle-shaped tubes in the interior. Several tubes are often found twisted together, and a specimen in the British Museum shows a mass of them coiled round each other in the very heart of a nut. The writer has not met with specimens of the pallets, but the valves are narrow and much curved.

Species 18. (Fig. *a*, *b*, *c*, Mus. Brit.)

TEREDO DENTICULATA. *Ter. testâ brevi, rotundâ, solidâ; areâ anticâ brevissimâ; auriculâ posticâ elongatâ, expansâ, suprà angustatâ, versus umbonem incurvâ; areis medianis latis, infrà auriculam brevibus; umbonibus callosis, denticulo spiniformi munitis; palmulis subovatis, ad latera unodenticulatis, supra dentes declivibus, stipulâ brevissimâ.*

THE DENTICULATED TEREDO. Shell short, round, solid; anterior area very short; posterior auricle elongated, expanded, narrow above, curved inwards towards the umbo; middle areas broad, short below the auricles; umboes callous, provided with a spine-shaped denticle; pallets subovate, with a tooth at the sides, sloped above the teeth, stem very short.

Gray. MS. Brit. Mus.

Hab. Britain?

Species 19. (Fig. *a*, *b*, *c*, Mus. Brit.)

TEREDO DUNLOPI. *Ter. testâ brevi, crassâ, globosâ, striis moniliformibus sculptâ; umbonibus curvis,*

callosis, intùs lamellâ accessoriâ instructâ; processu subumbonali valdè arcuato, lato; areâ anticâ subquadratâ, areâ antico-centrali latissimo; sulco mediano angusto, profundo, areâ postico-centrali angustissimâ; auriculâ posticâ extùs vix distinctâ, intùs luminâ notatâ; palmulis semicorneis, oblongis, uno latere convexis, altero planis, ad terminum bifurcatis, stipulâ breviùsculâ.

DUNLOP'S TEREDO. Shell short, thick, globose, sculptured with beaded striæ; umboes curved, callous, fitted inside with an accessory plate; subumbonal process much arched, broad; anterior area subquadrate, anterior-central area very broad; medial sulcus narrow, deep; posterior-central area very narrow; posterior auricle scarcely distinguished on the outside, marked within by a lamina; pallets half horny, oblong, convex on one side, flat on the other, two-forked at the end, stem rather short.

WRIGHT. Trans. Linn. Soc. 1864.

Naucitora Dunlopi. Wright.

Hab. River Como, Bengal.

The river Como flows from and returns to the river Ganges. Just on the bend Mr. Dunlop resided for some time, and the Teredos of this new species were found to have perforated some wood which had been cut down on the spot and left to float. The water of the river itself and of that part of the Ganges whence it flows is perfectly fresh, and the water, being remarkably soft, is used for drinking and all culinary purposes. We have here, therefore, a fresh-water Teredo.

MONOGRAPH

OF THE GENUS

PEDICULARIA.

"God is great and right!
He crowned man's brow with radiant orbs of light—
* * * * * *
To read His works God thus illumed the head,
But made man's breast no window to be read."—*N. T. Moile.*

1. a.

1. b.

1. c.

1. d.

2. a.

2. b.

2. c.

3. a.

3. b.

1. e.

Sowerby. del et lith

Vincent Brooks, Day & Son. Imp

PEDICULARIA.

Genus PEDICULARIA, *Swainson.*

Testa ovata, irregularis, patula, paucispiralis, radiatim costata; spira subcœlata, minuta; apertura maxima; columella planulata, rectiùscula, labio externo frequenter lobato.

Shell ovate, irregular, patulate, few-whorled, radiately ribbed; spire nearly hidden, minute; aperture very large, columella flattened, rather straight, outer lip frequently lobed.

The Messrs. Adams state in their work on Genera that the only known species is the one found parasitically attached to Mediterranean corals. But M. Deshayes in describing *Pedicularia elegantissima*, in his shells of Bourbon, speaks as if there were many other species, but does not refer to or describe them. The only species, besides the two above named, with which I am acquainted, is the *Pedicularia Pacifica*, described by Pease.

It is somewhat uncertain to what family the curious little shells composing this genus belong. On one hand they have been thought to have some affinity with the *Cyprædæ*, as there are indications of a mantle reflected over the lips, although not reaching the central region of the back. On the other hand, the shell would be most easily likened to a miniature *Concholepas* with irregularly extended margins.

Species 1. (Figs. *a*, *b*, *c*, *d*, *e*, Mus. Sowerby.)

PEDICULARIA SICULA. *Ped. testâ crassâ, valdè irregulari; albâ, fulvâ, vel roseo suffusâ; radiatim et divaricatim costatâ, costis minutè moniliformibus, labiis plerumque profundè lobatis, columellâ rectiùsculâ.*

THE SICILIAN PEDICULARIA. Shell thick, very irregular; white, fulvous, or suffused with pink; radiately and divergently ribbed, ribs very minutely beaded, lips generally deeply lobed; columella rather straight.

SWAINSON. Conchological Illustrations.

Hab. Found on small corals in the Mediterranean.

Species 2. (Fig. *a*, *b*, *c*, Mus. Sowerby.)

PEDICULARIA PACIFICA. *Ped. testâ tenuiùsculâ, oblongâ, irregularis, in medio contractâ, radiatim striis elevatis minutissimis ornatâ, striis concentricis decussatâ, apice conspicuo, involuto; rubidâ, interdum omnino violaceâ vel corneâ.*

THE PACIFIC PEDICULARIA. Shell rather thin, oblong, irregular, contracted in the middle, ornamented with very fine raised elevated radiating striæ; decussated with concentric striæ, apex conspicuous, involute; reddish, sometimes violet all over, or horny.

PEASE. Proc. Zool. Soc., 1865, p. 516.

Hab. Pacific Islands.

Species 3. (Fig. *a*, *b*, Mus. Maillard.)

PEDICULARIA ELEGANTISSIMA. *Ped. testâ ovato-oblongâ, valdè convexâ, purpureâ, radiatim costatâ, costis majoribus moniliformibus, minoribus interstitialibus lævibus; aperturâ angustâ, utraquè extremitate paulò depressâ, spirâ partim cœlatâ.*

THE ELEGANT PEDICULARIA. Shell ovate-oblong, purple, radiately ribbed; larger ribs beaded, smaller interstitial ones smooth; aperture narrow, a little depressed at each end; spire partly hidden.

DESHAYES. Isle de la Réunion, p. 20, Pl. XXXIII.

Hab. Isl. Bourbon.

MONOGRAPH

OF THE GENUS

MYTELIMERIA.

"But life did never to one man allow
Time to discover worlds and conquer too;
Nor can so short a line sufficient be,
To fathom the vast depths of nature's sea."—*Cowley.*

1.

2.

3.

4.

5.

6.

7.

G. B. Sowerby del. et lith.

Vincent Brooks Day & Son imp.

MYTILIMERIA.

PLATE I.

Genus MYTILIMERIA, *Conrad.*

Testa bivalvis, bimusculosa, tenuis, subæquivalvis, valde inæquilateralis, epidermide induta. Umbones spirales, subdistanter. Cardo edentulo; cartilagine partim in foveam instructa, lamina testacea libera obtecto.

Shell bivalve, with two muscles, thin, subequivalve, very inequilateral, covered with an epidermis. Umboes spiral, rather distant. Hinge without teeth, with a cartilage placed partly in a hollow, partly covered by a free testaceous plate.

The type of this genus is the rounded oval shell named *M. Nuttalli* by Conrad. The specimens in the British Museum are odd valves, the shelly plates of which are missing. The subsequently discovered large shell from Vancouver's Island, which has been described as *Lyonsia saxicola* by Dr. Baird, is fairly well adjudged to belong to this genus, and has the ossicle well developed.

Species 1. (Mus. Brit.)

MYTILIMERIA NUTTALLI. *Myt. testâ rotundè ovatâ, tenui, albâ; umbonibus terminalibus, distantibus, validè spiralibus; latere postico expanso, terminibus truncâtis.*

NUTTALL'S MYTILIMERIA. Shell roundly ovate, thin, white; umboes terminal, distant, very spiral; posterior side expanded, ends truncated.

CONRAD. Amer. Journ. Sci.

Hab. California.

The cartilage is placed in a narrow spiral groove running from the umbo, and where it comes to the hinge line it is enlarged.

Species 2. (Mus. Brit.)

MYTILIMERIA DIAPHANA. *Myt. testâ semipellucida, oblongâ, arcuatâ, linguiformi, subcomplanatâ, super aream posticam tæniis fuscis plurimus radiatâ; umbonibus elevatis, ferè terminalibus; latere postico ad terminum latè truncato; margine dorsali arcuatim depresso.*

THE DIAPHANOUS MYTILIMERIA. Shell semitransparent, oblong, curved, tongue-shaped, rather flattened, rayed on the posterior area with several brown bands; umboes raised, nearly terminal; posterior side broadly truncated; dorsal margin depressed with a curve.

CARPENTER (*Lyonsia*). Proc. Zool. Soc., 1855.

Hab. California.

Species 3. (Mus. Brit.)

MYTILIMERIA PLICATA. *Myt. testâ parvâ, lævigatâ, cuneatâ; anticè sinuatim plicatâ, posticè expansâ; umbonibus acutis, ferè terminalibus; latere antico brevissimo, acuminato, margine ventrali profundè sinuato; latere postico alato, infrà marginem dorsalem depresso, margine ventrali inflato.*

THE PLAITED MYTILIMERIA. Shell small, smooth, wedge-shaped, anteriorly sinuously plaited, posteriorly expanded; umboes acute, nearly terminal; anterior side very short, acuminated; ventral margin deeply sinuated; posterior side alated, depressed below the dorsal margin, ventral margin inflated.

GRAY. MS. Brit. Mus.

Hab. ——?

Species 4. (Mus. Brit.)

MYTILIMERIA SAXICOLA. *Myt. testâ magnâ, ventricosâ, oblongâ, epidermide valido, corneo-indutâ, ad margines ventralem et terminalum hianti; latere antico brevi, angusto; latere postico elongato, ventricoso, ad terminum truncato; valvâ dextrâ planiusculâ valvâ sinistrâ profundè ventricosâ; margine dorsali depresso, arcuato; laminâ cardinali magnâ, crassâ, extùs convexâ.*

THE ROCK-DWELLING MYTILIMERIA. Shell large, ventricose, oblong, covered with a strong, horny epidermis, gaping at the ventral and terminal margins; anterior side short, narrow; posterior side elongated, ventricose, truncated at the end; right valve rather flat; left valve deeply ventricose; dorsal margin depressed, curved; hinge plate large, thick, convex outside.

BAIRD (*Lyonsia*). Boundary Commission Report.

Hab. Vancouver's Island.

It has been found difficult to fix the generic status of this fine shell, which differs greatly in form and habit from the typical *Lyonsia*.

Species 5. (Mus. Brit.)

MYTILIMERIA NAVICULA. *Myt. testâ oblongâ, tenui, pallidâ, inflatâ; umbonibus tumidis, ferè terminalibus; latere antico brevissimo, perpendiculariter truncato; margine ventrali anticè sinuato, hianti, posticè inflato; latere postico oblongo, obliquè angulato, ad terminum truncato; margine dorsali depresso, rectiusculo; valvâ dextrâ profundâ.*

THE BOAT MYTILIMERIA. Shell oblong, thin, pale, inflated; umboes tumid, almost terminal; anterior side very short, perpendicularly truncated; ventral margin anteriorly sinuated, gaping, posteriorly inflated; posterior side oblong, obliquely angular, truncated at the end; dorsal margin depressed, rather straight: left valve deep.

ADAMS AND REEVE (*Lyonsia*). Proc. Zool. Soc., 1836, p. 70.

Hab. Iquiqui, Peru.

Species 6. (Mus. Brit.)

MYTILIMERIA PICTA. *Myt. testâ subrhomboideâ, solidâ, lineis fuscis divaricatis pictâ, ad marginem ventralem latissimè hianti; umbonibus terminalibus; latere antico brevissimo subtruncato; latere postico expanso lato; valvâ sinistrâ ventricossimâ; laminâ cardinali complanatâ.*

THE PAINTED MYTILIMERIA. Shell somewhat rhomboidal, solid, painted with divergent brown lines, very broadly gaping at the ventral margin; umboes terminal; anterior side very short, rather truncated; posterior side expanded, broad; left valve very ventricose; hinge plate flat.

SOWERBY (*Lyonsia*). Proc. Zool. Soc., 1834, p. 88.

Hab. Vancouver's Island.

Species 7. (Mus. Brit.)

MYTILIMERIA CUNEATA. *Myt. testâ tenui, palidâ, anticè inflatâ, posticè attenuatâ, complanatâ, latere postico brevi, truncato; umbonibus elevatis acuminatis; margine dorsali rectiusculo, ventrali medio anticeque inflato.*

THE WEDGE MYTILIMERIA. Shell thin, pale, inflated anteriorly, posteriorly attenuated, flattened; posterior side short, truncated; umboes elevated, acuminated; dorsal margin rather straight, ventral in the middle and anterior side inflated.

GRAY. MS. Brit. Mus.

Hab. ——?

MONOGRAPH

OF THE GENUS

SAXICAVA.

"For wonderful are all His Works,
Pleasant to know, and worthiest to be all
Had in remembrance always with delight."—*Milton.*

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1 b.

1 c.

1 d.

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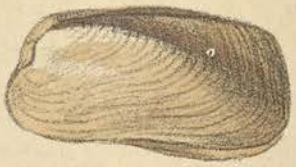

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G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

SAXICAVA.

PLATE I.

Genus SAXICAVA, *Fleuriau de Bellevue.*

Testa oblonga, æquivalvis, rugosa, ad marginem ventralem hians. Cardo ætate juniore minutè bidentatus, ætate majore edentulus. Impressiones musculares distantes; impressione pallii posticè latè sinuatâ.

Shell equivalve, rugose, gaping at the ventral margin. Hinge in a young state bidentate, when full-grown without teeth. Muscular impressions distant; impression of the mantle broadly sinuated posteriorly.

SYN. *Byssomya*, Cuvier. *Hiatella*, Daudin.

The *Saxicavæ* are rock-burrowing mollusca. They are found fixed in small hollows, often in the deserted holes of the *Pholas*. To the inner wall of the hole they attach themselves by a byssus, and often in the after growth of their valves become conformed to its shape. The young shells differ in two respects from the older form. They have small cardinal teeth which disappear when the animal is adult, and they have spines on the posterior angles, which also disappear. In this younger state they represent the genus *Hiatella* of Daudin. The arctic seas, the Mediterranean, and the Cape produce most of the few species known.

Species 1. (Mus. Brit.)

SAXICAVA ARCTICA. *Sax. testâ oblongâ, rugosâ, crassâ, ætate juniori posticè spiniferâ, cardine bidentato, ætate seniori cardine edentulo; latere antico angusto, brevi, margine ventrali sinuoso, umbonibus depressis, anticis; latere postico latiori, quadrato, biangulato, latè truncato.*

THE ARCTIC SAXICAVA. Shell oblong, rugose, thick; posteriorly spiniferous when young, with two teeth on the hinge; without teeth on the hinge when adult; anterior side narrow, short; ventral margin sinuous; umboes depressed, anterior; posterior side broader, square, biangular, broadly truncated.

LINNÆUS. Systema Naturæ.
Hiatella arctica, Lamarck.
Solen minutus, Linnæus.
Hiatella minuta, Turton.
Donax rhomboides, Deshayes.
Hab. Arctic regions, British and North American coasts.

Species 2. Mus. ——? (copied.)

SAXICAVA PETITII. *Sax. testâ subcuneiformi, subregulariter rugatâ; latere antico brevi, angusto, margine ventrali profundè sinuato, latè hianti; latere postico expanso, rotundatim obliquè angulato, post angulum latè, obliquè truncato; margine dorsali recto.*

PETIT'S SAXICAVA. Shell rather cuneiform, rather regularly wrinkled; anterior side short, narrow; ventral margin deeply sinuous, broadly gaping; posterior side expanded, roundly, obliquely angular, broadly obliquely truncated behind the angle; dorsal margin straight.

DESHAYES. MS. Mus. Cum. in Brit.
Hab. ——?

The wrinkles in this species are regular and sharp.

Species 3. (Mus. Brit.)

SAXICAVA RUGOSA. *Sax. testâ tenuiusculâ, rhomboideâ, lævigatâ, posticè vix angulatâ, leviter rugatâ, margine dorsali subarcuato; latere antico brevissimo.*

THE RUGOSE SAXICAVA. Shell rather thin, rhomboidal, smooth, posteriorly scarcely angular, slightly wrinkled; dorsal margin a little arched; anterior side very short.

LINNÆUS (*Mytilus*). Systema Naturæ.
Saxicava Gallicana, Lamarck.
Mya Byssifera, Fabricius.

Hab. British Islands.—France.

More smoothly rounded and less sharply angular than *Saxicava arctica*, with more convex ventral and dorsal margins.

Species 4. (Mus. Brit.)

SAXICAVA SULCATA. *Sax. testâ crassâ, subcuneatâ, concentricè undis magnis profundiùsculis rugatâ; latere antico angusto, producto, subacuminato; umbonibus elevatis, margine ventrali profundè excavato; latere postico lato, rotundatim angulato, margine ventrali convexo, margine dorsali depresso, margine terminali truncato.*

THE GROOVED SAXICAVA. Shell thick, rather cuneate, concentrically wrinkled in large waves; anterior side narrow, produced, rather acuminated; umboes elevated, ventral margin deeply excavated; posterior side broad, roundly angular; ventral margin convex; dorsal margin depressed; terminal margin truncated.

DESHAYES ——? MS. Mus. Brit.

Hab. Clyde.

The writer is uncertain respecting the authority for this species, which certainly seems distinct from any known forms of *S. arctica*, or *S. rugosa*. It is represented in the British Museum by an odd valve from the Clyde.

Species 5. (Mus. Brit.)

SAXICAVA PHOLADIS. *Sax. testâ elongatâ, submytiliformi, concentricè validè rugatâ; latere antico brevissimo, angustiùsculo; latere postico magis expanso, elongato, obliquè angulato, margine dorsali recto; margine terminali latè truncato; margine ventrali convexo.*

THE PHOLAS-LIKE SAXICAVA. Shell elongated, rather mytilus-shaped, concentrically strongly wrinkled, anterior side very short, rather narrow; posterior side more expanded, elongated, obliquely angular; dorsal margin straight; terminal margin broadly truncated; ventral margin convex.

LAMARCK. Anim. s. Vertèbres.

Hab. Greenland.

It is quite an open question whether this may not be one of the numerous forms of *Saxicava rugosa*.

Species 6. (Mus. Brit.)

SAXICAVA SOLIDA. *Sax. testâ crassâ, rhomboideâ, inæquivalvi; valvâ dextrâ profundâ, ad umbonem multò valvam sinistram altitudine superanti; latere antico brevissimo, declivi, umbonibus ferè terminalibus; latere postico biangulato, angulis obliquis, moniliformibus, margine terminali perpendiculariter truncato.*

THE SOLID SAXICAVA. Shell thick, rhomboidal, inæquivalve; right valve deep, much higher than left at the umbo; anterior side very short, sloped, umboes nearly terminal; posterior side biangular, angles oblique, moniliform; terminal margin perpendicularly truncated.

SOWERBY. Proc. Zool. Soc., 1834.

Hab. ——?

A very solid shell with two posterior keeled and partly beaded angles.

Species 7. (Mus. Brit.)

SAXICAVA FLACCIDA. *Sax. testâ parvâ, subovatâ, tenuiùsculâ, terminis rotundis, umbonibus magnis, ferè terminalibus; margine ventrali medio subexcavato.*

THE FLACCID SAXICAVA. Shell small, rather oval, rather thin; ends rounded, umboes large, nearly terminal; ventral margin a little excavated in the middle.

GOULD. United States Exploring Expedition?

Hab. North America.

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8b.

8c.

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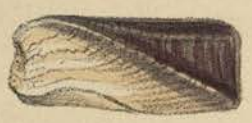

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G.B. Sowerby del et Lith.

Vincent Brooks Day & Son Imp

SAXICAVA.

PLATE II.

Species 8. (Figs. *a*, *b*, *c*, *d*, Mus. Brit.)

SAXICAVA AUSTRALIS. *Sax. testâ oblongâ, valdè rugosâ, plusminusvè distortâ; umbonibus magnis, perelevatis, ferè terminalibus; latere postico obliquè producto, angulato, ad angulum obsolete spinoso, margine ventrali ad terminum sursùm acclivis, margine terminali obliquè truncato, margine dorsali recti, areâ complanatâ.*

THE AUSTRALIAN SAXICAVA. Shell oblong, very rugose, more or less distorted; umboes large, much elevated, nearly terminal; posterior side obliquely produced, angular, obsoletely spinose at the angle, ventral margin sloped upwards at the end, terminal margin obliquely truncated, dorsal margin straight with a flattened area.

LAMARCK. Anim. sans Vert., v. p. 153.

Saxicava distorta, Say.

Mactra crassa, Peron.

Hab. Australia—(var.) United States.

More tumid, especially towards the umboes, than *Saxicava arctica*. The younger specimens have spines on the angle, as in that species, but these are worn off as the shell becomes larger, leaving tubercles in their places. The right valve is frequently deeper and higher at the umboes than the left. The American type (fig. *d*) corresponds with the Australian and not with the British form.

Species 9. (Mus. Brit.)

SAXICAVA TENUIS. *Sax. testâ rhomboideâ, elongatâ, tenui, subinflatâ; latere antico brevissimo, declivi; umbonibus elevatis, acutis, ferè terminalibus; latere postico subattenuato, obliquè acutè angulato; angulo subserrato.*

THE THIN SAXICAVA. Shell rhomboidal, elongated, thin, rather inflated; anterior side very short, sloped; umboes raised, sharp, nearly terminal; posterior side rather attenuated, obliquely sharply angular; angle a little serrated.

SOWERBY. Proc. Zool. Soc., 1834, p. 88.

Hab. —— ?

Species 10. (Mus. Brit.)

SAXICAVA GUERINII. *Sax. testâ oblongâ, angustâ, rectiùsculâ; latere antico brevi, obliquè declivi, infrà subangulatâ; latere postico elongato, ad terminum obtusè truncato; margine ventrali rectiùsculo, medio excavato.*

GUERIN'S SAXICAVA. Shell oblong, narrow, rather straight; anterior side short, obliquely sloped, a little angular below; posterior side elongated, obtusely truncated at the end; ventral margin rather straight, excavated in the middle.

PAYRAUDEAU. Mollusca. Plate I.

Hab. Mediterranean Sea.

Species 11. (Mus. Brit.)

SAXICAVA ANGASII. *Sax. testâ irregulariter rhomboideâ, magnâ, solidâ, altâ, subinæquivalvi, valdè inæquilaterali, flavido-rubescenti, fusco nebulatâ; valvâ dextrâ altiùsculâ, profundiorâ; latere antico brevissimo, declivi; latere postico obliquè angulato, oblongo, ad terminum quadrato.*

ANGAS'S SAXICAVA. Shell irregularly rhomboidal, large, solid, elevated, rather inequivalve, very inequilateral, reddish yellow clouded with brown; right valve rather the higher and deeper; anterior side very short, sloped; posterior side obliquely angular, oblong, square at the end.

A. ADAMS. Proc. Zool. Soc., 1865, 643.

Hab. St. Vincent's Gulf, S. Australia.

The only species exhibiting anything like distinct colouring, excepting *Saxicava purpurascens*.

Species 12. (Mus. Brit.)

SAXICAVA SPINIFERA. *Sax. testâ parvâ, lævigatâ, supernè quadratâ, infrà bilobatâ; latere antico brevissimo, umbonibus terminalibus, margine ventrali profundè excavato; latere postico lato, truncato, margine dorsali et angulo obliquo decurrentibus spinis acutis prominentibus ornatis.*

THE SPINIFEROUS SAXICAVA. Shell small, smooth, square above, two-lobed below; anterior side very short, umboes terminal, ventral margin deeply excavated; posterior side broad, truncated, dorsal margin and obliquely decurrent angle ornamented with sharp prominent spines.

SOWERBY.

Hab. Savannah Bay.

The young of *Saxicava arctica, rugosa,* and *Australis* are spinose on the dorsal margin and posterior angle, but no specimen of either has been found with spines so prominent, or similar to this in other characters.

Species 13. (Mus. Deshayes? copied.)

SAXICAVA SIMILIS. *Sax. testâ cuneiformi, oblongâ, radiatim striatâ, posticè biangulatâ, ad angulos carinis subspiniferis duabus munitâ; valvâ dextrâ majori, ventricosâ, valvâ sinistrâ planiùsculâ; latere antico angusto, brevissimo; umbonibus terminalibus; latere postico expanso, ad terminum latè truncato.*

THE SIMILAR SAXICAVA. Shell cuneiform, oblong, radiately striated, posteriorly biangular, strengthened at the angles by two subspiniferous keels; right valve the larger, ventricose, left valve rather flatter; anterior side narrow, very short; umboes terminal; posterior side expanded, broadly truncated at the end.

DESHAYES. Mollusques de l'Isle de la Réunion.

Hab. Isl. Bourbon.

M. Deshayes likens this little species to *Saxicava arctica,* from which it differs in being radiately striated and in the keel-like ridges on the angles.

Species 14. (Mus. Brit.)

SAXICAVA PURPURASCENS. *Sax. testâ elongatâ, angustâ, rectâ, concentricè rugatâ; latere antico brevissimo, umbonibus prominentibus terminalibus; latere postico purpureo suffuso, elongato, obliquè angulato; ad angulum et infrà marginem dorsalem rugoso, carinato.*

THE PURPLISH SAXICAVA. Shell elongated, narrow, straight, concentrically wrinkled; anterior side very short, umboes prominent, terminal; posterior side suffused with purple, elongated, obliquely angular; with a wrinkled keel on the angle, and below the dorsal margin.

SOWERBY. Proc. Zool. Soc., 1834, p. 88.

Hab. ——?

MONOGRAPH

OF THE GENUS

PUPINIDÆ.

"All things that are, though they have several ways,
Yet in their being join with one advice
To honour Thee."—*Trench.*

Pupina.

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G.B. Sowerby, del. et lith.

Vincent Brooks Day & Son, Imp.

PUPINIDÆ.

PLATE I.

Fam. PUPINIDÆ. (A. ADAMS.)

Animal terrestre. Testa pupæformis, operculum corneum, multispirale.

Genus PUPINA. Vignard. *Testa brevis, nonnunquam nitens; aperturâ bicanaliculatâ.* Sp. 1—34, 29 omissâ.

Genus HARGREAVESIA. Adams. *Testa brevis; aperturâ ad suturam uni-canaliculatâ.* Sp. 29.

Genus CALLIA. Gray. *Testa brevis, nitens, umbilico clauso, apertura margine integro.* Sp. 35—38.

Genus REGISTOMA. Hasselt. *Testa nitens; apertura margine infra columellam rimato.* Sp. 39—47.

Genus CATAULUS. Pfeiffer. *Testa pyramidata, perforata, ultimo anfractu infrà carinato, apertura margine externo ad carinam producto.* Sp. 48—65.

Genus ARINIA. Adams. Sp. 66.

Genus POLLICARIA. Adams.
Genus MEGALOMASTOMA. Guild. } *Umbilico ferè clauso, aperturæ margine interno integro.* Sp. 67—92.

Genus RAPHAULUS. Pfeiffer. *Apertura supernè tubâ munita.*

Animal terrestrial, shell pupa-shaped, operculum horny; multispiral. Sp. 1—34.

PUPINA. Shell short, sometimes shining; aperture with two channels. Sp. 1—34. Omit 39.

HARGREAVESIA. Shell short; aperture with a channel at the suture. Sp. 39.

CALLIA. Shell short, shining; umbilicus closed; aperture with the margin entire.

REGISTOMA. Shell shining; aperture with the margin notched under the columella. Sp. 39—47.

CATAULUS. Shell pyramidal, perforated, last whorl keeled below, aperture with outer edge produced at the keel. Sp. 48—65.

ARINIA. Sp. 66.

POLLICARIA and MEGALOMASTOMA. Umbilicus nearly closed, inner margin of the aperture entire. Sp. 67—92.

RAPHAULUS. Upper part of aperture provided with a tube.

The *Pupinidæ* do not affect northern climates, but abound in India, Australia, also in the Pacific and other islands.

Species 1. (Mus. Sowerby. Pupina.)

PUPINA BILINGUIS. *Pup. testâ altâ, fulvâ, pupæformi, apice obtuso; anfractibus quinque, superioribus brevibus, penultimo alto, ultimo inflato, subgloboso; aperturâ parvâ, circulari, canalibus duobus, ad suturam uno, infra columellam altero, obliquè oblongis, arcuatis, in tumores linguiformes productis.*

THE DOUBLE-TONGUED PUPINA. Shell raised, fulvous, pupa-shaped, with obtuse apex; whorls five, upper short, penultimate high, last inflated, rather globose; aperture small, circular, with two canals, one at the suture, the other below the columella, obliquely oblong, curved, produced in two callous linguiform ridges.

PFEIFFER. Proc. Zool. Soc. Thes. Conch. *Pupinidæ*, Pupina. Fig. 8, 9, 10.

Hab. East Australia.

The channels on the upper and lower part of the aperture are prolonged in two curved tongue-shaped callosities.

Species 2. (Mus. Sowerby.)

PUPINA VENTROSA. *Pup. testâ ventricosâ, semi-pellucidâ, breviter subpyramidatâ; ultimo anfractu subgloboso; aperturâ obliquè ovatâ, anticè productâ, labio interno arcuato; canalibus duobus calloso-marginatis, breviter arcuatim productis.*

THE INFLATED PUPINA. Shell ventricose, semi-pellucid, shortly rather pyramidal; last whorl rather globose; aperture obliquely ovate, anteriorly produced, inner lip arched; two callus-edged canals shortly arched, produced.

DOHRN. Adams. Sowb. Thes. *Pupinidæ*. Pupina. Fig. 12, 13.

Hab. Cape York.

Species 3. (Mus. Sowerby.)

PUPINA ARTATA. *Pup. testâ ovatâ, albâ vel fulvâ, breviter pupæformi, apice obtuso; anfractibus quinque, superioribus brevibus, ultimo inflato, subgloboso; aperturâ parvâ, circulari, canalibus duobus, obliquè elongatis, conspicuè callo-marginatis, arcuatis.*

THE JOINTED PUPINA. Shell ovate, white or fulvous, shortly pupa-shaped; apex obtuse; whorls five, upper short, last inflated, subglobose; aperture small, circular, canals two, obliquely elongated, conspicuously callus-edged, curved.

BENSON. Adams. Sowb. Thes. Conch. *Pupinidæ*, Pupina, Fig. 1, 2.

Hab. Moulmein, India.

Species 4. (Mus. ——? Copied.)

PUPINA GRANDIS. *Pup. testâ magnâ, ventricosâ, pupæformi, fuscâ, solidâ, apice obtuso; anfractibus septem, superioribus brevibus, penultimo inflato, ultimo alto, inflato; aperturâ parvâ, circulari, margine aurantio, crassissimo, latissimo, profundè bicanaliculato.*

THE LARGE PUPINA. Shell large, ventricose, pupa-shaped, brown, solid, with obtuse apex; whorls seven, upper short, last but one inflated, last high, inflated; aperture small, circular; margin orange, very thick, very broad, with two deep canals.

FORBES. Adams. Sowb. Thes. *Pupinidæ*, Pupina, Fig. 20.

Hab. Louisiade Archipelago.

Species 5. (Mus. Hanley.)

PUPINA ARULA. *Pup. testâ albâ vel fulvâ, ovatâ, nitente, apice obtuso, anfractibus septem, superioribus brevissimis, ultimo maximo; aperturâ anticè obliquè productâ, labio externo rotundo, canali postico lato, antico producto, recurvo, columellâ brevi, latâ, truncatâ.*

THE LITTLE PLOUGH PUPINA. Shell white or fulvous, ovate, shining, with obtuse apex, whorls seven, upper very short, last very large; aperture obliquely produced in front, outer lip rounded, posterior canal broad, anterior produced, recurved; columella short, broad, truncated.

BENSON. Ann. Nat. Hist. Ser. 2, vol. 17, p. 230.

Hab. Birmah.

Species 6. (Mus. Hanley.)

PUPINA BLANFORDI. *Pup. testâ albidâ, nitente, spirâ brevi, obtusâ, ultimâ subglobosâ; aperturâ anticè obliquè producto; labio externo supernè in sinum rotundum producto; columellâ brevissimâ, truncatâ, in canalem curvum terminante.*

BLANFORD'S PUPINA. Shell rather white, shining, spire short, obtuse, the last rather globose; aperture obliquely produced in front; outer lip produced into a rounded sinus, columella very short, truncated, ending in a curved canal.

THEOBALD. Journ. As. Soc. Bengal, 1864.

Hab. Pegu.

Species 7. (Mus. Hanley.)

PUPINA IMBRICIFERA. *Pup. testâ fuscâ, brevi, ovato-subpyramidatâ, nitente; anfractibus sex, superioribus brevibus, convexis, ultimo subgloboso; aperturâ anticè obliquè productâ, labio externo lato, complanato, margine interno in liram semicircularem elevato, canalibus duobus in tumores linguiformes productis.*

THE IMBRICATED PUPINA. Shell brown, short, ovately subpyramidal, shining; whorls six, upper short, convex, last rather globose; aperture obliquely produced in front, outer lip broad, flattened, inner margin raised in semicircular ridge, canals two, produced in linguiform swellings.

BENSON. Ann. Nat. Hist. Ser. 2, vol. 17, p. 230.

Hab. Sylhet, Teria Ghat.

Species 8. (Mus. Sowerby.)

PUPINA MERIDIONALIS. *Pup. testâ altâ, pupæformi, acuminatâ, fulvâ, nitente; anfractibus sex, convexiùsculis; aperturâ circulari, margine rotundo; canalibus longiùsculis, callosis.*

THE SOUTHERN PUPINA. Shell elevated, pupa-shaped, acuminated, fulvous, shining; whorls six, rather convex; aperture circular; margin rounded; canals rather long, callous.

PFEIFFER. Proc. Zool. Soc. Sowb. Thes. *Pupinidæ*, Pupina, Fig. 33.

Hab. South Australia.

Species 9. (Mus. Sowerby.)

PUPA PLANILABRIS. *Pup. testâ altâ, pupæformi, fulvâ, nitente, apice acuminato; anfractibus convexiùsculis; aperturâ circulari; margine planulato; canale antico ad suturam elevato, calloso, columellâ tenui, ad terminum obliquè truncato, cuneato, canali brevissimo.*

THE FLAT-LIPPED PUPA. Shell high, pupa-shaped, fulvous, shining, apex acuminated; whorls rather convex; aperture circular; margin flattened; anterior canal raised at the suture, callous, columella thin, obliquely truncated at the end, cuneate, canal very short.

PFEIFFER. Proc. Zool. Soc. Adams. Sowb. Thes. Pupina, Fig. 34.

Hab. South Australia.

Species 10. (Mus. Brit.)

PUPINA AUREA. *Pup. testâ breviter pupæformi, aureo-fulvâ, nitente; anfractibus superioribus parvis, penultimo alto, inflato, ultimo subgloboso; aperturâ obliquè productâ, bicanaliferâ; canalibus productis, callosis.*

THE GOLDEN PUPINA. Shell shortly pupæform, golden-fulvous, shining; upper whorls small, penultimate high, inflated, last rather globose; aperture obliquely produced, with two canals; canals produced, callous.

HINDS. Voy. Sulphur.

Hab. New Guinea.

Pupina

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G.B.Sowerby, del. et Lith.

Vincent Brooks, Day & Son, Imp.

PUPINIDÆ.

(*PUPINA.*)

PLATE II.

Species 11. (Mus. Brit.)

PUPINA BICANALICULATA. *Pup. testâ fulvâ, subaureâ, translucidâ, ventricosâ, obliquâ, politâ; anfractibus ultimo et penultimo latis, inflatis, altis; aperturâ obliquâ, columellâ brevi, truncato, callo suturali elongato, labio externo supernè sinuatim depresso, albo, rotundo, anticè obliquè producto.*

THE DOUBLE-CHANNELLED PUPINA. Shell fulvous, slightly golden, translucid, ventricose, oblique, polished; last two whorls broad, inflated, elevated; aperture oblique, columella short, truncated; sutural callus elongated, outer lip sinuously depressed above, narrow, white, rounded, obliquely produced in front.

SOWERBY. Thesaurus, first Monograph.

Hab. Sibonga, Island of Zebu, Philippines.

Species 12. (Mus. Brit.)

PUPINA KERAUDRENI. *Pup. testâ angustâ, fulvâ, politâ, apice obtuso; anfractibus ultimo et penultimo altis; aperturâ parvâ, columellâ brevissimâ, acutâ; callo suturali inconspicuo, labio externo angusto, obliquè producto.*

KERAUDREN'S PUPINA. Shell narrow, fulvous, polished; apex obtuse, last two whorls high; aperture small, columella very short, sharp; sutural callus inconspicuous, outer lip narrow, obliquely produced.

VIGNAL. Proc. Zool. Soc. 1864, p. 162. Ad. Thes. Conch.

Hab. New Ireland.

Species 13. (Mus. Brit.)

PUPINA MOUHOTI. *Pup. testâ subaureâ, ventricosâ, spirâ acuminatâ; anfractibus quinque, rapidè crescentibus, ultimo subgloboso; aperturâ obliquâ, callo suturali conspicuo, columellæ margine interno reflexo, termino truncato, labio externo obliquè producto, crassiùsculo, supernè depresso.*

MOUHOT'S PUPINA. Shell rather golden, ventricose, spire acuminated; whorls five, rapidly increased, the last subglobose; aperture oblique, sutural callus conspicuous, inner margin of the columella reflected, truncated at the end, outer lip obliquely produced, rather thick, depressed above.

PFEIFFER. Proc. Zool. Soc. 1861, 196.

Hab. Camboja.

Species 14. (Mus. Brit.)

PUPINA ANGASII. *Pup. testâ ventricosâ, solidâ, rubescenti, obliquâ; anfractibus quinque, suturâ crenulatâ separatis, penultimo maximo, inflato, ultimo anticè obliquè subangustato; aperturâ rotundâ, bicanaliculatâ, margine lato, crasso, integro, retrorsùm reflexo.*

ANGAS'S PUPINA. Shell ventricose, solid, reddish, oblique; whorls five, separated by a crenulated suture, penultimate whorl very large, inflated, the last a little narrowed obliquely in front; aperture rounded, with two canals, margin broad, thick, entire, reflected backwards.

ADAMS. Proc. Zool. Soc. 1875. Pl. 45.

Hab. South Australia.

Species 15. (Mus. —— ? Copied.)

PUPINA MOULINSIANA. *Pupa testâ ventricosâ, striatâ, flavidâ; anfractibus quinque, tribus superioribus brevibus, rotundis, penultimo majori, inflatâ, ultimo rectiùsculo magno; aperturâ subrotundatâ, margine crasso, albo, rimâ superiori angusto, inferiori magno, columellâ brevi, ad terminum angulato, lato, labio externo rotundo, supernè obliquè depresso.*

MOULINS' PUPINA. Shell ventricose, striated, yellowish; whorls five, three upper short, rounded,

penultimate larger, inflated, last rather straight, large; aperture rather rounded, margin thick, white, upper notch narrow, lower large, columella short, angular at the end, broad, outer lip rounded, obliquely depressed above.

FISCHER et BERNADI. Adams, Sowb. Thes. Conch. No. 25.

Hab. N. Caledonia.

Species 16. (Mus. Brit.)

PUPINA HUMILIS. *Pup. testâ subpyramidatâ, aureo-fuscâ; anfractibus quinque, tribus superioribus brevissimis, rotundis, penultimo majori, inflato, ultimo magno, rotundo; aperturâ anticè circulari, canali antico caudatâ, rimâ posticâ magnâ, labio externo rotundo, posticè obliquè depresso, anticè ante canalem contracto.*

THE HUMBLE PUPINA. Shell rather pyramidal, golden-brown; whorls five, three upper ones very short, rounded, the penultimate larger, inflated, last large, rounded; aperture rounded, anterior canal caudal, posterior notch large, outer lip rounded, posteriorly obliquely depressed, anteriorly contracted in front of the canal.

JACQUENOT. Adams, Sowb. Thes. Conch. No. 25.

Hab. New Guinea.

Species 17. (Mus. Brit.)

PUPINA SUPERBA. *Pup. testâ fuscâ, obliquâ; anfractibus quinque, tribus superioribus brevissimis, rotundis, penultimo declivi, majori, ultimo magno; aperturâ anticè productâ, margine aureo, rotundo, rimâ posticâ magnâ, obliquâ, anticâ obliquè retrorsâ (acclivi).*

THE SUPERB PUPINA. Shell brown, oblique; whorls five, three upper very short, rounded, penultimate sloped, larger, last large; aperture anteriorly produced, margin golden, rounded, posterior notch large, oblique, anterior obliquely turned back (sloped upwards).

PFEIFFER. Mon. Heliceorum.

Hab. Sumatra.

Species 18. (Mus. Brit.)

PUPINA VESCOI. *Pup. testâ globoso-pyramidali, brevi, politâ, subaureâ; anfractu ultimo inflato, rotundo; aperturâ obliquè ovatâ, anticè productâ; rimâ posticâ rotundâ, callo parvo, acuminato, columellâ brevissimâ, labio externo posticè obliquè depresso, ante columellam contracto.*

VESCOE'S PUPINA. Shell globose-pyramidal, short, polished, rather golden; last whorl inflated, rounded; aperture obliquely ovate, anteriorly produced; posterior notch rounded, callus small, acuminated, columella very short, outer lip posteriorly obliquely depressed, contracted in front of the columella.

MORELET. Adams, Sowb. Thes. Conch. No. 25.

Hab. Paulo Condor.

Species 19. (Mus. Sowerby.)

PUPINA BORNEENSIS. *Pup. testâ aureo-fuscâ, politâ, pyramidatâ; anfractibus quinque, convexis, gradatim crescentibus; aperturâ subrotundâ, anticè obliquè productâ, margine crassiùsculo, albo, rotundo; rimâ posticâ inconspicuâ, columellâ obliquè truncatâ.*

THE BORNEAN PUPINA. Shell golden-brown, polished, pyramidal; whorls five, convex, gradually increased; aperture rather round, anteriorly obliquely produced, margin rather thick, white, rounded; posterior notch inconspicuous, columella obliquely truncated.

PFEIFFER. Proc. Zool. Soc. Adams, Sowb. Thes. No. 25.

Hab. Borneo.

Species 20. (Mus. Brit.)

PUPINA PUPINÆFORMIS. *Pup. testâ pyramidatâ, rubro-fuscâ, politâ; anfractibus octo, gradatim crescentibus, rotundatis, apice acuminato; aperturâ rotundâ, obliquè paulò producto, canali postico parvo, rimâ anticâ angustâ, columellâ brevissimâ, latâ, labio externo planulato, ad rimam sinu recurvo.*

THE PUPINA-SHAPED PUPINA. Shell pyramidal, red-brown, polished; whorls eight, gradually increased, rounded, apex acuminated; aperture rounded, a little produced obliquely, posterior canal small, anterior slit narrow, columella very short, broad, outer lip flattened, with a recurved sinus at the back.

SOWERBY. Thes. Conch. No. 25, *Pupinidæ*, Pl. III. f. 38–9.

Hab. Philippines.

Pupina.

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28a

28b

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

PUPINIDÆ.

PLATE III.

Species 21. (Mus. Brit.)

PUPINA PFEIFFERI. *Pup. testâ altâ, angustâ, tenui, fulvâ, semi-pellucidâ, obliquâ; anfractibus quinque, superioribus quatuor brevibus, rotundis, ultimo alto, rectiùsculo; aperturâ parvâ, obliquè subovatâ, productâ, canali postico et callo suturali conspicuis, columellâ brevissimâ, labio externo tenui, albo, rotundo, supernè depresso.*

PFEIFFER'S PUPINA. Shell elevated, narrow, thin, fulvous, semi-pellucid, oblique; whorls five, the four upper short, rounded, the last high, rather straight: aperture small, obliquely sub-ovate, produced, posterior canal and sutural callus conspicuous, columella very short, outer lip thin, white, rounded, depressed above.

DORHN. Adams, Sowb. Thes. No. 24-5.

Species 22. (Mus. Brit.)

PUPINA THOMPSONI. *Pup. testâ solidâ, obliquâ, fulvâ, politâ, medio sub-inflato, apice acuminato; anfractibus quinque, ultimo magno; aperturâ anticè obliquè productâ, margine albo, callo suturali linguiformi, labio interno calloso, continuo, columellâ latâ, obliquâ, truncatâ.*

THOMPSON'S PUPINA. Shell solid, oblique, fulvous, polished, inflated in the middle, apex acuminated; whorls five, the last large; aperture anteriorly obliquely produced, margin white, sutural callus tongue-shaped, inner lip callous, continuous, columella broad, oblique, truncated.

FORBES. A. Adams, Mon. Sowb. Thes. *Pupinidæ*, Pl. III. f. 18.

Hab. Australia.

Species 23. (Mus. Sowerby.)

PUPINA MITIS. *Pup. testâ brevi, lævi, fulvâ, subinflatâ, apice obtuso; anfractibus quatuor, penultimo inflato, brevi, ultimo magno; aperturâ obliquè productâ, labio externo albo, angusto, callo suturali parvo, columellâ brevissimâ, acuminatâ.*

THE MELLOW PUPINA. Shell short, smooth, fulvous, rather inflated, apex obtuse; whorls four, penultimate inflated, short, last large; aperture obliquely produced, outer lip white, narrow, sutural callus small, columella very short, acuminated.

A. ADAMS ——? Sowerby's Thes. Conch. *Pupinidæ*, Pl. III. f. 19.

Hab. New Ireland.

Species 24. (Mus. Brit.)

PUPINA STRANGEI. *Pup. testâ subcylindricâ, fulvâ, politâ, medio inflatâ, apice breviter acuminato; anfractibus quinque, tribus apicalibus brevissimis, parvis, penultimo magno, inflato, ultimo mediocri; aperturâ parvâ, obliquâ, callo suturali linguiformi, labio interno marginato, columellâ brevissimâ.*

STRANGE'S PUPINA. Shell subcylindrical, fulvous, polished, inflated in the middle, apex shortly acuminated; whorls five, three apical, very short, small, penultimate large, inflated, last middle-sized; aperture small, oblique, sutural callus tongue-shaped, inner lip bordered, columella very short.

PFEIFFER. Mon. Hel. Sowb. Thes. *Pupina*, Fig. 24.

Hab. Moreton Bay.

The inflation of the penultimate whorl, and the comparatively cylindrical form, distinguish this species from several of the preceding.

Species 25. (Mus. ——? Copied.)

PUPINA OTTONIS. *Pup. testâ ventricosâ, fulvo-rubescenti, rectiùsculâ, brevi, politâ; spirâ breviter pyramidatâ; anfractibus quinque, gradatim crescentibus, ultimo magno, globoso; aperturâ subrotundâ, margine albo, columellâ latâ, truncatâ, callo suturali subdistanti.*

OTTO'S PUPINA. Shell ventricose, reddish-fawn, rather straight, short, polished; spire shortly pyramidal; whorls five, gradually increased, the last large, globose; aperture rather round, margin white, columella broad, truncated, sutural callus rather distant.

DORHN. —— ? Adams, Sowb. Thes. *Pupinidæ*, Part 25, Pl. III. f. 25.

Hab. Isl. Luzon, Philippines.

Species 26. (Mus. Brit.)

PUPINA NICOBARICA. *Pup. testâ obliquâ, ventricosâ, fulvo-rubescenti, politâ; anfractibus quatuor, tribus superioribus brevibus, rapidè crescentibus, ultimo alto, inflato; aperturâ circulari, labio externo albo, anticè obliquè producto, callo suturali mediocri, columellâ brevi truncato..*

THE NICOBAR PUPINA. Shell oblique, ventricose, fulvous-reddish, polished; whorls four, three upper short, rapidly increased, last high, inflated; aperture circular, outer lip white, anteriorly obliquely produced; sutural callus middle-sized, columella short, obliquely truncated.

PFEIFFER. Adams, Sowb. Thes. No. 24-5, *Pupinidæ*, *Pupa*, f. 27.

Hab. Nicobar.

Species 27. (Mus. Brit.)

PUPINA RUFA. *Pup. testâ rectâ, subpyramidatâ, elatâ, rufo-fuscâ, ad suturam albo-fasciatâ, apice obtuso; anfractibus quinque, æqualiter crescentibus; aperturâ circulari, margine albido, labio externo rotundo, labio interno valido, callo suturali conspicuo, columellâ crassâ, ad terminum cuneatâ.*

THE REDDISH PUPINA. Shell straight, rather pyramidal, elevated, reddish-brown, with a whitish band at the suture, apex obtuse; whorls five, equally increased; aperture circular, margin whitish, outer lip round, inner lip strong, sutural callus conspicuous, columella thick, cuneate at the end.

PFEIFFER. Adams, Sowb. Thes. Conch. No. 25. *Pupina*, f. 29.

Hab. Japan.

Species 28. (Fig. *a*, *b*. Mus. Brit.)

PUPINA MINDOROENSIS. *Pup. testâ breviùsculâ, pyramidatâ, albâ vel fuscâ, politâ, spirâ subacuminatâ; anfractibus quinque, æqualiter crescentibus, superioribus rotundis, ultimo convexiùsculo; aperturâ circulari, labio externo lato, canali postico et rimâ anticâ magnis, columellâ breviùsculâ, latâ, truncatâ.*

THE MINDORO PUPINA. Shell rather short, pyramidal, white or brown, polished, spire a little acuminated; whorls five, equally increased, upper ones rounded, the last rather convex; aperture circular, outer lip broad, posterior canal and anterior notch large, columella rather short, rather broad, truncated.

ADAMS & REEVE. Voy. Sam.

Hab. Japan.

HARGRAVESIA. (Adams.)

Canali postico magno, rimâ anticâ nullâ.
Posterior canal large, no anterior notch.

Species 29. (Mus. Sowerby.)

HARGRAVESIA POLITA. *Har. testâ inflatâ, subpyramidatâ, fulvâ, politâ, breviùsculâ; anfractibus quinque, tribus superioribus brevibus, rapidè crescentibus, penultimo inflato, ultimo magno; aperturâ circulari, obliquè productâ, canali postico elongato, callo suturali linguiformi, labio externo vix incrassato, cum interno anticè continuo.*

THE POLISHED HARGRAVESIA. Shell inflated, rather pyramidal, fulvous, polished; rather short; whorls five, the three upper ones short, quickly increased, penultimate inflated, last large; aperture circular, obliquely produced, posterior canal elongated, sutural callus linguiform, outer lip scarcely thickened, anteriorly continuous with the inner lip.

A. ADAMS. Proc. Zocl. Soc. 1870.

Hab. Soloman Islands.

Pupina

30

31

32

33

Callia

34*a*

34*b*

a *b*

35

36

37

a *b*

38

G. B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

PUPINIDÆ.

PLATE IV.

Species 30. (Mus. ——? Copied.)

PUPINA SWINHOEI. *Pup. testâ rectâ, pyramidatâ, subventricosâ, politâ; spirâ acuminatâ, anfractibus sex, convexis, ferè æqualiter crescentibus; aperturâ vix circulari, canalibus postico et antico rotundis, latis; columellâ latâ, subfoveolatâ, latè truncatâ, labio externo lato, duplicato.*

SWINHOE'S PUPINA. Shell straight, pyramidal, rather ventricose, polished; spire acuminated; whorls six, convex, almost equally increased; aperture scarcely circular; posterior and anterior canals rounded, broad; columella broad, rather hollowed, broadly truncated; outer lip broad, doubled.

ADAMS (Pupinopsis). Proc. Zool. Soc. 1866, f. 318.

Hab. Isl. Formosa.

Species 31. (Mus. Sowerby.)

PUPINA PINETICOLA. *Pup. testâ parvâ, lævigatâ, brevi, fulvâ; anfractibus quatuor, duobus superioribus parvis, penultimo inflato, ultimo magno, infrà obliquè subattenuato; aperturâ anticè productâ, circulari.*

THE PINE-INHABITING PUPINA. Shell small, smooth, short, fulvous; whorls four, two upper small, last but one inflated, last large, obliquely rather attenuated; aperture anteriorly produced, circular.

COX. Proc. Zool. Soc. 1866, p. 375.

Hab. Australia.

Species 32. (Mus. Sowerby.)

PUPINA DIFFICILIS. *Pup. testâ parvâ, subcylindricâ, politâ, pallidè aurantio-fulvâ; anfractibus quatuor, tribus superioribus brevibus, æqualiter crescentibus, ultimo majùsculo; aperturâ obliquâ, canali postico lato, columellâ brevi, acutâ, labio externo obliquè producto, aurantio, crassiùsculo.*

THE DIFFICULT PUPINA. Shell small, rather cylindrical, polished, pale orange, fulvous; whorls four, three upper short, equally increased, last rather large; aperture oblique, posterior canal broad, columella short, acute, outer lip obliquely produced, orange, rather thick.

SEMPER. Proc. Zool. Soc. 1864, p. 252.

Hab. Pelew Island.

Species 33. (Mus. Brit.)

PUPINA ADAMSII. *Pup. testâ altâ, subpyramidatâ, aurantio-fuscâ, politâ; anfractibus sex, superioribus rotundis, gradatim crescentibus, ultimo majùsculo, convexo; aperturâ rotundâ, labio interno valido, cánali postico elongato, arcuato, callo suturali valido, columellâ latâ, crasso, truncato, labio externo supernè sinuato, duplicato.*

ADAMS' PUPINA. Shell elevated, somewhat pyramidal, orange-brown, polished; whorls six, upper ones rounded, gradually increasing, last rather large, convex; aperture rounded, inner lip strong, posterior canal elongated, curved, sutural callus strong, columella broad, thick, truncated, outer lip sinuous above, doubled.

SOWERBY. *Pupinella Swinhoei*, A. Adams. Proc. Zool. Soc. 1866, p. 318.

Hab. Isl. Formosa.

(*CALLIA.*)

Species 34. (Fig. *a*, *b*, Mus. Sowerby.)

CALLIA LUBRICA. *Cal. testâ ventricosâ, breviter obliquâ, fulvâ vel luteâ, politissimâ; anfractibus quatuor, tribus brevibus, ultimo magno, lateraliter gibboso; aperturâ rotundâ, margine albo rotundo.*

THE SHINING CALLIA. Shell ventricose, short, ob-

lique, fulvous, or yellowish, brightly polished; whorls four, three short, last large, gibbous at one side; aperture rounded, margin white, rounded.

Sowerby (Pupina). Thesaurus Conchyliorum. *Pupina* (first monograph), No. 1.

Hab. Isl. Panay, Philippines.

Species 35. (Fig. *a*, *b*, Mus. Sowerby.)

Callia splendens. *Cal. testâ pyramidatâ, subventricosâ, fuscâ, politâ; spirâ acuminatâ; anfractibus quatuor, rapidè crescentibus; aperturâ rotundâ, margine angusto, rotundo.*

The resplendent Callia. Shell pyramidal, rather ventricose, brown, polished; spire acuminated, whorls four, rapidly increased; aperture rounded, margin narrow, rounded.

Dohrn. —— ? Adams in Sowerby's Thesaurus Conchyliorum, No. 25.

Hab. Lizard Island.

More regularly pyramidal than the preceding, with gradually increasing whorls.

Species 36. (Mus. Sowerby.)

Callia aurita. *Cal. testâ angustiùsculâ, albidâ, politissimâ, obliquâ; anfractibus quatuor, tribus breviùsculis, ultimo majùsculo; aperturâ obliquè productâ, margine rotundo.*

The eared Callia. Shell rather narrow, whitish very polished, oblique; whorls four, three rather short, last rather large; aperture obliquely produced, margin rounded.

Zeigler —— ?

Hab. —— ?

Believing, from the narrower form of this shell, that it differs from Callia rubra, I have adopted the name which I find attached in manuscript to a number of specimens.

Species 37. (Mus. Sowerby.)

Callia ambigua. *Cal. testâ ventricosâ, subpyramidatâ, brevi, politâ, pallidè fulvescenti; anfractibus quinque, ultimo majùsculo; aperturâ rotundâ, obliquè productâ, margine aurantio, columellâ ad dorsum perforatâ.*

The ambiguous Callia. Shell ventricose, rather pyramidal, short, polished, pale fulvous; whorls five, the last rather large; aperture rounded, obliquely produced, margin orange, columella perforated at the back.

Semper —— ? (Registoma). Adams, in Sowerby's Thesaurus, *Pupinidæ*, Pl. II. Registoma, f. 9.

Hab. Isl. Luzon, Philippines.

The minute perforation, visible only at the side or back of the columella, constitute this species a link between the *Registomæ*, which have a distinct notch or canal, and the *Calliæ*, which have the margin of the aperture quite entire. The shell, however, is much more nearly related to the latter than to the former subgenus.

Species 38. (Fig. *a*, *b*, Mus. Sowerby.)

Callia Wallacei. *Cal. testâ aureo-fulvâ, politâ, obliquè distortâ; anfractibus quatuor, apicalibus planulatis, ad dorsum retrorsis; aperturâ parvâ, rotundâ, simplici.*

Wallace's Callia. Shell golden-fulvous, polished, obliquely distorted; whorls four, the apical ones flattened, turned over the back; aperture small, rounded, simple.

Pfeiffer —— ? Adams, in Sowerby's Thesaurus, Part 24-5. *Pupinidæ*, Pl. III. Callia, f. 7, 8.

Hab. Ceram.

Registoma.

39

40

41

a

42

43

44

b

c

a b

45

a b

46

a b

47

G.B. Sowerby del et lith.

Vincent Brooks, Day & Son, Imp.

PUPINIDÆ.

(*REGISTOMA.*)

PLATE V.

Species 39. (Mus. Brit.)

REGISTOMA EXIGUUM. *Reg. testâ pallidè fulvâ, angustâ, subcylindricâ, politâ; apice obtuso; anfractibus quatuor, penultimo tumido, ultimo magno; aperturâ subrotundâ, obliquè productâ, margine angusto, rimâ anticâ angustissimâ.*

THE NARROW REGISTOMA. Shell pale fulvous, narrow, rather cylindrical, polished; apex obtuse; whorls four, penultimate tumid, last large; aperture rather round, obliquely produced, margin narrow, anterior slit very narrow.

SOWERBY. Thes. Conch. *Pupinidæ*, Pl. II. Registoma, f. 8.

Hab. Isl. Luzon, Philippines.

Differing from Registoma Cumingiana in form being less elongated, and in the linear notch.

Species 40. (Mus. Brit.)

REGISTOMA VITREUM. *Reg. testâ pyramidatâ, brevi, hyalinâ, fusco-rubescenti; anfractibus sex, brevibus, ferè æqualiter crescentibus, tumidis; aperturâ subcirculari, margine incrassato, reflexo, aurantio, columellâ crassiùsculâ, obliquè truncatâ.*

THE GLASSY REGISTOMA. Shell pyramidal, short, hyaline, brownish-red; whorls six, short, almost equally increasing, tumid; aperture rather circular, margin thickened, reflected, orange, columella rather thick, obliquely truncated.

SOWERBY. Adams, Thes. Conch. *Pupinidæ*, Pl. II. Registoma, f. 7.

Hab. Isl. Luzon, Philippines.

Species 41. (Mus. Sowerby.)

REGISTOMA CUMINGIANA. *Reg. testâ exiguâ, altâ, pallidè fulvâ vel albâ, politâ, solidiùsculâ, medio et suprà tumidâ; anfractibus quinque, apicalibus parvis, alteris tumidis, altis, ultimo altissimo, obliquo; aperturâ rotundâ, obliquè productâ, margine angusto, rotundo, rimâ anticâ lineari.*

THE CUMINGIAN REGISTOMA. Shell narrow, raised, pale fulvous, or white, polished, rather solid, tumid in the middle and above, high, the last very high, oblique; aperture round, obliquely produced, margin narrow, rounded, anterior notch linear.

PFEIFFER. Adams, Sowerby's Thesaurus Conchyliorum, *Pupinidæ*, Pl. II., Registoma, f. 12, 13.

Hab. New Caledonia.

Species 42. (Mus. Sowerby.)

REGISTOMA GRANDE. *Reg. testâ obliquè subglobosâ, politâ, aurantiâ, vel lacteâ, vel purpurascenti; anfractibus quinque, tribus superioribus brevissimis, dorso retrorsis; penultimo brevi, obliquo, ultimo subgloboso, versus aperturam obliquè gibboso, medio planulato; aperturâ obliquè productâ, labio externo expanso, columellâ planulatâ, truncatâ; rimâ rotundatâ.*

THE LARGE REGISTOMA. Shell obliquely subglobose, polished, orange or milk-white, or purplish; whorls five, three upper very short, turned over the back, last but one short, oblique, last rather globose, obliquely gibbous towards the aperture, flattened in the middle; aperture obliquely produced, outer lip expanded, columella flattened, truncated; notch rounded.

GRAY. Adams, Sowerby's Thes. Conch. *Pupinidæ*, Pl. II., Registoma, f. 1, 2, 3.

Hab. Philippines.

Species 43. (Mus. Sowerby.)

REGISTOMA FUSCUM. *Reg. testâ altâ, pyramidatâ, fusco-rubescenti, politâ; spirâ acuminatâ; anfractibus 7, breviùsculis, lentè crescentibus, con-*

vexis, ultimo subrotundo; aperturâ subcirculari, margine aurantio, labio externo rotundo, columellâ rectâ, truncatâ, rimâ rotundâ.

THE BROWN REGISTOMA. Shell high, pyramidal, reddish-brown, polished; spire acuminated; whorls seven, rather short, slowly increased, convex, the last rather round; aperture rather circular, margin orange, outer lip rounded, columella straight, truncated, notch round.

GRAY. Adams, Sowb. Thes. Conch. *Pupinidæ*, Registoma, f. 4, 5.

Hab. Philippines.

Species 44. (Mus. Sowerby.)

REGISTOMA SIMILE. *Reg. testâ altâ, subventricosâ, fulvâ, politâ, subpyramidatâ, spirâ obtusâ; anfractibus septem, superioribus breviusculis, lentè crescentibus, convexis, penultimo majusculo, ultimo magno; aperturâ subcirculari, margine albo, labio externo crasso, columellâ crassâ, cuneatâ, rimâ anticâ magnâ, rotundâ.*

THE SIMILAR REGISTOMA. Shell high, rather ventricose, fulvous, polished, rather pyramidal, spire obtuse; whorls seven, upper rather short, slowly increasing, convex, penultimate rather large; aperture rather circular, margin white, outer lip thick, columella thick, cornered, anterior notch large, rounded.

GRAY. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., Registoma, f. 6.

Hab. Isl. Luzon, Philippines.

If there be any tangible character besides the white lip distinguishing this species from the preceding, it will be found in the last two whorls being disproportionately ventricose, and the spire being, in consequence, more nearly pyramidal in form.

Species 45. (Mus. Sowerby.)

REGISTOMA PELLUCIDUM. *Reg. testâ angustè subglobosâ, subpellucidâ, fulvâ, politâ; anfractibus quinque, tribus superioribus brevissimis, dorso retrorsis, penultimo brevi, subretrorso, ultimo obliquè elevato, subgloboso, versus aperturam obliquè gibboso, medio paulò planulato; aperturâ parvâ, margine albo, columellâ angustâ, rimâ lineari.*

THE PELLUCID REGISTOMA. Shell narrowly subglobose, rather pellucid, fulvous, polished; whorls five, three upper very short, turned over the back, last but one short, rather turned backwards, last obliquely raised, somewhat globose, obliquely gibbous towards the aperture, middle a little flattened; aperture small, margin white, columella narrow, notch linear.

SOWERBY. Adams in Thes. Conch. *Pupinidæ*, Pl. II., Registoma, f. 10, 11.

Hab. Isl. Zebu, Philippines.

Species 46. (Mus. Sowerby.)

REGISTOMA COMPLANATUM. *Reg. testâ fulvâ, vel fuscâ, angustâ, subcylindricâ, altâ, politâ, spirâ obtusâ; anfractibus quatuor, duobus superioribus brevibus, rotundis, duobus inferioribus altis, cylindraceis; aperturâ simplici, obliquè productâ, rimâ anticâ lineari.*

THE FLATTENED REGISTOMA. Shell fulvous, or brown, narrow, rather cylindrical, high, polished, spire obtuse; whorls four, upper two short, round, lower two high, cylindrical; aperture simple, obliquely produced, anterior notch linear.

PEASE. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., Registoma, f. 14, 15.

Hab. Kingsmill Group, Pacific.

A narrower and smaller shell than *Registoma pellucidum*.

Species 47. (Mus. Sowerby.)

REGISTOMA BRAZIERI. *Reg. testâ fulvâ, politâ, altâ, angustâ, medio subventricosâ; apice obtuso; anfractibus quinque tribus, superioribus brevibus, penultimo inflato, ultimo majusculo, obliquo, anticè subattenuato; aperturâ obliquè productâ, parvâ, circulari, rimâ apertâ.*

BRAZIER'S REGISTOMA. Shell fulvous, polished, high, narrow, rather ventricose in the middle; apex obtuse; whorls five, three upper short, penultimate inflated, last rather large, oblique, anteriorly a little attenuated; aperture obliquely produced, small, circular, notch open.

CRASSE. Journ. de Conch. No. XIII.

Hab. Erromanga in the Pacific.

Cataulus

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

PUPINIDÆ.

PLATE VI.

Species 48. (Mus. Hanley.)

CATAULUS NIETERI. *Cat. testâ fusiformi, pallidè fulvâ, vel fuscâ, fusco-viridi, strigatâ, spirâ altâ, pyramidatâ; anfractibus septem, superioribus lentè crescentibus, penultimo et ultimo majùsculis, paulò inflatis, ultimo ad umbilicum latè carinato; aperturâ subproductâ, labio externo duplicato, margine externo subalato.*

NIETER'S CATAULUS. Shell fusiform, pale fulvous, or brown, striped with brownish-green, spire raised, pyramidal; whorls seven, upper slowly increasing, penultimate and last rather large, a little inflated, last broadly keeled at the umbilicus; aperture somewhat produced, outer lip duplicate, outer margin slightly winged.

HANLEY. Indian Shells.

Hab. —— ? India.

Species 49. (Mus. —— ? Copied.)

CATAULUS TORTUOSUS. *Cat. testâ albâ, fusiformi; anfractibus septem, rotundis, inflatis, ultimo infrà carinato, ad aperturam laxato; aperturâ distanti, obliquè productâ, margine integro reflexo.*

THE TORTUOUS CATAULUS. Shell white, fusiform; whorls seven, rounded, lower inflated, last keeled below, loosened at the aperture; aperture distant, obliquely produced, margin entire, reflected.

GRAY. —— ? Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., Cataulus, f. 1.

Hab. Nicobar Island.

Species 50. (Mus.—— ? Copied.)

CATAULUS CALCADENSIS. *Cat. testâ fuscâ, altâ, subcylindricâ, obliquè striatâ; anfractibus septem, convexis, suturâ profundâ; ultimo anfractu latè carinato; aperturâ disjunctâ, perpendiculariter subovatâ, anticè rostratâ, rimâ anticâ maximâ, labio externo duplicato.*

THE CALCADIAN CATAULUS. Shell brown, high, subcylindrical, oblique, striated, whorls seven, convex, suture deep; last whorl with a wide keel, aperture disjoined, perpendicularly rather ovate, anteriorly beaked, anterior notch very large, outer lip double.

BEDDOME. Hanley, Indian Shells.

Hab. Calcadia, India.

Species 51. (Mus. Brit.)

CATAULUS DUPLICATUS. *Cat. testâ fuscâ, rubescenti, subpyramidatâ, robustâ, medio et infrà subinflatâ; anfractibus octo, superioribus brevibus, attenuatis, ultimis tribus altis, inflatis; umbilico magno, carinâ crassâ; aperturâ rotundâ, aurantiâ.*

THE DUPLICATE CATAULUS. Shell reddish-brown, rather pyramidal, robust, rather inflated in and below the middle; whorls eight, upper short, attenuated, last three high, inflated; umbilicus large, keel thick; aperture round, orange.

PFEIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., Cataulus, f. 2.

Hab. Ceylon.

Species 52. (Mus. Brit.)

CATAULUS CUMINGII. *Cat. testâ fuscâ, solidâ, subfusiformi, angulatim rugatâ; spirâ acuminatâ, infra medium inflatâ, umbilico majùsculo, carinâ prominenti; aperturâ subrotundâ, margine albo, labio externo lato, leviter duplicato, rimâ anticâ maximâ.*

CUMING'S CATAULUS. Shell brown, solid, rather fusiform, angularly wrinkled; spire acuminated, inflated below the middle, umbilicus rather large, keel prominent; aperture rather round, margin white, outer lip broad, slightly double, anterior notch very large.

PFEIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., Cataulus, f. 3.

Hab. Ceylon.

Species 53. (Mus. Hanley.)

CATAULUS BLANFORDI. *Cat. testâ fuscâ-rubescenti, pyramidatâ, altâ, supernè attenuatâ; anfractibus novem, tribus inferioribus subinflatis, convexiùsculis, umbilico angustiùsculo, carinâ crassâ; aperturâ subovatâ, margine aurantio, lato, convexo, rimâ anticâ maximâ.*

BLANFORD'S CATAULUS. Shell red-brown, pyramidal, high, attenuated above; whorls nine, three lower rather inflated, rather convex; umbilicus rather narrow, keel thick; aperture rather ovate, margin orange, broad, convex, anterior notch very large.

DORHN. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., Cataulus, f. 8.

Hab. Kandy, Ceylon.

Species 54. (Mus. Sowb.)

CATAULUS THWAITESII. *Cat. testâ fusco-rubescenti, fusiformi, robustâ, breviùsculâ; anfractibus septem, medianis inflatis, ultimo infrà ante carinam contracto, umbilico parvo; aperturâ subovatâ, margine lato, duplicato, albo.*

THWAITES'S CATAULUS. Shell reddish-brown, fusiform, robust, rather short; whorls seven, middle inflated, last below contracted before the keel; umbilicus small; aperture rather oval, margin broad, doubled, white.

PFEIFFER. Adams, Sowb. Thes. *Pupinidæ*, Pl. II., Cataulus, f. 6.

Hab. Ceylon.

Species 55. (Mus. Sowb.)

CATAULUS RECURVATUS. *Cat. testâ latè pyramidatâ, stramineâ, ventricosâ, apice acuminato, rubro; anfractibus septem, rotundis, æqualiter crescentibus, ultimo ante carinam contracto, umbilico angusto, carinâ tenui; aperturâ majùsculâ, margine lato, duplicato, infrà ad rimam recurvato, rimâ maximâ.*

THE RE-CURVED CATAULUS. Shell broadly pyramidal, straw-coloured, ventricose, apex acuminated, red; whorls seven, rounded, equally increased, last contracted before the keel, umbilicus narrow, keel thin; aperture rather large, margin broad, doubled, bent backwards below the notch, notch very large.

A. ADAMS, Sowb. Thes. Conch. Pupinidæ, Pl. II., Cataulus, f. 16.

Hab. Ceylon.

The duplicated edge of the aperture, where interrupted by the notch, terminates at each side in a prominent point.

Species 56. (Mus. Hanley.)

CATAULUS EURYPTREMA. *Cat. testâ rubrâ, ventricosâ, pyramidatâ, versus apicem attenuatâ, acuminatâ, medio et infrà inflatâ; anfractibus novem, duobus ultimis latis, inflatis, ultimo ad carinam contracto, umbilico lato, carinâ acutâ; aperturâ perpendiculariter oblongâ, marginibus externo et antico latissimis, labio externo leviter duplicato, rimâ maximâ.*

THE BROAD-EDGED CATAULUS. Shell red, ventricose, pyramidal, attenuated towards the apex, acuminated, inflated in and below the middle; whorls nine, two last broad, inflated, last contracted at the keel, umbilicus broad, keel sharp; aperture perpendicularly oblong, outer and lower margins very wide; outer lip slightly double, notch very large.

PFEIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., Cataulus, f. 17.

Hab. Ceylon.

Species 57. (Mus. Sowb.)

CATAULUS LAYARDI. *Cat. testâ breviùsculâ, flavidâ, pyramidatâ, spirâ acuminatâ; anfractibus convexis, umbilico lato, carinâ acutâ; aperturâ albâ, margine utrinque duplicato, rimâ parvâ, rotundâ.*

LAYARD'S CATAULUS. Shell rather short, yellow, pyramidal, spire acuminated; whorls convex, umbilicus broad, keel sharp; aperture white, margin doubled on each side, notch small, round.

GRAY. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., Cataulus, f. 7.

Hab. Ceylon.

Cataulus.

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C. B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp

PUPINIDÆ.

PLATE VII.

(*CATAULUS.*)

Species 58. (Fig. *a*, *b*, Mus. Brit.)

CATAULUS MARGINATUS. *Cat. testâ angustâ, pyramidatâ, albâ vel fuscâ; anfractibus octo, lentè crescentibus, undulatim rugatis, ultimo infrà contracto, acutè carinato, intus carinam umbilicato; aperturâ subrotundâ, rimâ parvâ, labio externo duplicato, infrà ad rimam acutè rostratâ.*

THE BORDERED CATAULUS. Shell narrowly pyramidal, white or brown; whorls eight, slowly increased, with wavy wrinkles, the last contracted below, acutely keeled, widely umbilicated within the keel; aperture rather rounded, notch small, outer clip duplicated, sharply beaked below at the notch.

PFEIFFER. Mon. Heliceorum.

Hab. Ceylon.

Species 59. (Mus. Sowerby.)

CATAULUS AUSTENIANUS. *Cat. testâ latè pyramidatâ, breviùsculâ, ventricosâ; fusco-rubescente; anfractibus octo, convexis; ultimo carinâ crassâ et umbilico magno terminante; aperturâ magnâ, rotundâ, margine aurantio, incrassato, lato, convexo; rimâ magnâ, rotundâ.*

AUSTEN'S CATAULUS. Shell broadly pyramidal, rather short, ventricose; reddish brown; whorls eight, convex, last ending with a thick keel and large umbilicus; aperture large, round, margin orange, thickened, convex, broad; notch large, rounded.

BENSON. Ann. Nat. Hist. Ser. 2.

Hab. Ceylon.

Species 60. (Mus. Hanley).

CATAULUS PYRAMIDATUS. *Cat. testâ latè pyramidatâ, ventricosâ, fusco-rubescente, tenuiter striatâ; anfractibus septem, ultimo convexo, carinâ crassâ et umbilico lato terminante; aperturâ rotundâ, margine albo, lato, planulato, rimâ obliquâ, maximâ.*

THE PYRAMIDAL CATAULUS. Shell broadly pyramidal, ventricose, reddish brown, finely striated; whorls seven, the last convex, ending in a thick keel and broad umbilicus; aperture rounded, margin white, broad, flattened, notch oblique, very large.

PFEIFFER. Proc. Zool. Soc. 1852.

Hab. Ceylon.

Species 61. (Mus. Hanley.)

CATAULUS HÆMASTOMUS. *Cat. testâ latè pyramidatâ, obliquè striatâ, fulvâ; apice acuminato; anfractibus octo, convexis, ultimo carinato, supra carinam contracto; aperturâ maximâ, rotundâ; margine latissimo, convexo, vividè rubro, ad suturam elevato, infrà rotundè rostrato, rimâ magnâ, rotundâ.*

THE RED-MOUTHED CATAULUS. Shell broadly pyramidal, obliquely striated, fulvous; apex acuminated; whorls eight, convex, the last keeled, contracted above the keel; aperture very large, rounded; margin very broad, convex, bright red, raised at the suture, roundly beaked below, notch large, round.

PFEIFFER. Proc. Zool. Soc. 1852.

Hab. Ceylon.

More elegantly fusiform and acuminated than the two preceding.

Species 62. (Mus. Sowerby.)

CATAULUS TEMPLEMANI. *Cat. testâ subfusiformi, angustâ, fusco-rubescente; anfractibus octo, medianis subventricosis, ultimo infrà contracto, umbilico angustiùsculo; aperturâ subovatâ, margine vividè aurantio, angusto, infrà in rostrum obtusissimum producto; rimâ parvâ.*

TEMPLEMAN'S CATAULUS. Shell rather fusiform, narrow, reddish brown; whorls eight, middle ones rather ventricose, last contracted below, with a rather narrow umbilicus; aperture rather ovate, margin bright red, narrow, produced below in a very obtuse beak; notch small.

PFEIFFER. Adams. Sowb. Thes. Conch. *Pupinidæ*, Cataulus, Fig. 62.

Hab. Ceylon.

Species 63. (Mus. Hanley.)

CATAULUS LEUCOCHEILUS. *Cat. testâ pyramidatâ, striatâ, flavidâ; anfractibus octo, medianis subventricosis, apicalibus parvis, attenuatis, ultimo supra carinam validè contracto; carinâ acutâ; umbilico magno; aperturâ subovatâ, margine expanso, albo, reflexo, recurvo, ad suturam elevato, ad rimam producto; rimâ maximâ.*

THE WHITE-EDGED CATAULUS. Shell pyramidal, striated, yellow; whorls eight, middle subventricose, apical small, attenuated, last strongly contracted above the keel; keel sharp; umbilicus large; aperture rather ovate, margin expanded, white, reflected, bent backwards, raised at the suture, produced at the notch; notch very large.

A. ADAMS. Sowb. Thes. Conch. *Pupinidæ*, Cataulus, Fig. 62.

Hab. Ceylon.

Species 64. (Mus. Hanley.)

CATAULUS DECORUS. *Cat. testâ subfusiformi, lævigatâ, rubro-fuscâ; anfractibus septem, subelevatis, convexis, ultimo supra carinam validissimè coarctato; carinâ magnâ, acutâ; aperturâ parvâ, subovatâ, margine lato, expanso, ad suturam elevato, subalato, infrà rostrato, rimâ magnâ.*

THE DECOROUS CATAULUS. Shell subfusiform, smooth, reddish-brown; whorls seven, rather elevated, convex, last very strongly contracted above the keel; keel large, sharp; aperture small, subovate, margin broad, expanded, raised and somewhat winged at the suture, beaked below, notch large.

BENSON. Adams. Sowb. Thes. Conch. *Pupinidæ*, Cataulus, Fig. 13.

Hab. Ceylon.

Species 65. (Mus. Hanley.)

CATAULUS AUREUS. *Cat. testâ altâ, subfusiformi, aurantiâ, tenuiter striatâ; anfractibus septem, altis, tribus vel quatuor apicalibus roseis, attenuatis, medianis subventricosis, ultimo elevato; aperturâ mediocri; margine duplicato, extùs expanso, infrà validè rostrato; rimâ maximâ.*

THE GOLDEN CATAULUS. Shell raised, subfusiform, orange, finely striated; whorls seven, elevated, three or four apical rosy, attenuated; middle rather ventricose, last raised; aperture middle-sized; margin double, expanded on the outside, strongly beaked below; notch very large.

HANLEY. Indian Shells, Pl. 106, Fig. 9.

Hab. India.

(*ARINIA.*)

Species 66. (Mus. —— ? Copied.)

ARINIA MINOR. *Ari. testâ parvâ, pupæformi, fuscâ; anfractibus quatuor, brevibus, rotundis, superioribus elevato-striatis; aperturâ rotundâ, margine albo, integro.*

THE SMALL ARINIA. Shell small, pupa-shaped, brown; whorls four, short, rounded, upper ridge striated; aperture round, margin white, entire.

SOWERBY (Cyclostoma). Adams. Sowb. Thes. Conch. *Pupinidæ*, Arinia, Fig. 1.

Hab. Isl. of Panay, Philippines.

Pollicaria

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Megalomastoma.

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G.B. Sowerby del et Lith.

Vincent Brooks Day & Son Imp

PUPINIDÆ.

PLATE VIII.

(*POLLICARIA OR HYBOCISTIS.*)

Species 67. (Mus. Sowerby.)

POLLICARIA MOUHOTI. *Pol. testâ solidâ, ventriccsâ, brevi, fusco-purpureâ, pupæformi; anfractibus quinque, rapidè crescentibus, ultimo magno, alto, vix uno latere gibboso; umbilico parvo, obliquo; aperturâ magnâ, subrotundâ, posticè subacuminatâ; margine aurantio, rotundo.*

MOUHOT'S POLLICARIA. Shell solid, ventricose, short, brown-purple, pupa-shaped; whorls five, rapidly increased, the last large, elevated, a very little gibbous on one side; umbilicus small, oblique; aperture large, rather round, slightly acuminated posteriorly; margin orange, round.

PFEIFFER. Proc. Zool. Soc. 1862, p. 276.

Hab. Camboja, Lao Mountains.

Species 68. (Mus. Brit.)

POLLICARIA GRAVIDA. *Pol. testâ solidâ, ventricosâ, breviter pupæformi, fulvâ; subtortuâ; apice obtuso, anfractibus quinque, tribus apicalibus brevibus, rapidè crescentibus, penultimo ventricoso, uno latere gibboso, ultimo magno, obliquo, uno latere gibboso; infrà angustato, rimato, umbilicato; aperturâ subrotundâ, margine duplicato, margine externo supra suturam elevato, subtubuloso, margine interno anticè ultra externum extenso.*

THE HEAVY POLLICARIA. Shell solid, very ventricose, shortly pupæform, fulvous, a little tortuous; apex obtuse, whorls five, three apical short, rapidly increased, penultimate ventricose, gibbous on one side; last large, oblique, gibbous on one side, narrow below, notched, umbilicated; aperture rather rounded, margin duplicated, outer margin raised above the suture, a little tubular; inner margin anteriorly extended beyond the outer.

BENSON. Adams. Sowb. Thes. Conch. *Pupinidæ*, Pollicaria, Fig. 5.

Pollicaria pollex, Gould.

Hab. Moulmein, India.

Species 69. (Mus. Brit.)

POLLICARIA MYERSI. *Pol. testâ magnâ, inflatâ, fulvâ, fusiformi; apice obtuso; anfractibus quinque, apicalibus tribus parvis, penultimo magno, ultimo maximo; infrà angustè umbilicatâ; aperturâ magnâ, supernè subacuminatâ, margine duplicato.*

MYERS' POLLICARIA. Shell large, inflated, fulvous, fusiform; apex obtuse; whorls five, three apical small, last but one large, last very large; narrowly umbilicated below; aperture large, a little acuminated above, margin doubled.

HAINES. Adams. Sowb. Thes. Conch. *Pupinidæ*, Pollicaria, Fig. 11.

Hab. Siam.

(*MEGALOMASTOMA.*)

Species 70. (Mus. Brit.)

MEGALOMASTOMA LOWEI. *Meg. testâ breviùsculâ, pyramidatâ, purpureo-fuscâ; apice acuminato; anfractibus septem, gradatim crescentibus, convexiùsculis; ultimo ad umbilicum carinato; aperturâ rotundâ, margine duplicatâ, expansâ, intùs aurantiâ, extùs albâ, planulatâ.*

LOWE'S MEGALOMASTOMA. Shell rather short, pyramidal, purple-brown; apex acuminated; whorls seven, gradually increased, rather convex, last keeled at the umbilicus; aperture round, margin duplicate, expanded, orange within, white without, rather flattened.

ADAMS and SOWERBY. Thes. Conch. *Pupinidæ*, Megalomastoma.

Hab. Labuan.

Species 71. (Mus. Sowerby.)

MEGALOMASTOMA TORTUM. *Meg. testâ solidâ, ventricosâ, pupæformi; anfractibus sex, rotundis, tribus apicalibus brevibus, rotundis, pallidè fulvis, ultimo purpureo-nigrescente, quam penultimo angustiori; aperturâ circulari, margine reflexo, labio interno angusto, externo suprà et infrà alato.*

THE TWISTED MEGALOMASTOMA. Shell solid, ventricose, pupa-shaped; whorls six, rounded, three apical short, rounded, pale fulvous, last blackish-purple, narrower than the penultimate; aperture circular, margin reflected, inner lip narrow, outer winged above and below.

WOOD. Suppl. Pl. 6, p. 23.

Cyclostoma auriculatum. D'Orb.

Cyclostoma alutaceum. Menke.

Cyclostoma apertum. Poey.

Cyclostoma digitale. Gundlach.
Cyclostoma Taylorianum. Pfeiffer.
Cyclostoma idolum. Ferrussac.
Cyclostoma bicolor. Guilding.
Cyclostoma seminudum. Poey.
Hab. Cuba.

Species 72. (Mus. Brit.)

MEGALOMASTOMA SIMULACRUM. *Meg. testâ elatâ, pyramidatâ, rubro-fuscâ, tenuiter striatâ; anfractibus decem, convexis; aperturâ circulari, margine duplicato, latere interno angustè elevato, externo latè reflexo, expanso, planulato, albo; apud anfractum ultimum angustato, sinuatim plicato.*

THE IMAGE MEGALOMASTOMA. Shell elevated, pyramidal, reddish-brown, finely striated; whorls ten, convex; aperture circular, margin duplicate, on the inner side narrowly elevated, on the outer broadly reflected, expanded, flattened, white; narrowed and sinuously plaited against the last whorl.

MORELET. Adams. Sowb. Thes. Megalomastoma, Fig. 3, 4.
Hab. Guatemala.

Species 73. (Mus. Sowerby.)

MEGALOMASTOMA GUATEMALENSE. *Meg. testâ elatâ, pyramidatâ, angustâ, turritâ, fuscâ; anfractibus rotundis, gradatim crescentibus, ultimo angustè umbilicato, carinato; aperturâ subrotundâ, margine reflexo, angusto, albo.*

THE GUATEMALA MEGALOMASTOMA. Shell elevated, pyramidal, narrow, turreted, brown; whorls round, gradually increased, last narrowly umbilicated, carinated; aperture rather rounded, margin reflected, narrow, white.

PFEIFFER. Adams. Sowb. Thes. Megalomastoma, Fig. 6.
Hab. Guatemala.

Species 74. (Mus. Sowerby.)

MEGALOMASTOMA LEONINUM. *Meg. testâ brevi, lævi, pupæformi, fulvâ, solidâ, ventricosâ; anfractibus quinque, ultimo magno, infrà carinato et umbilicato; aperturâ magnâ, subcirculari, margine albo, angusto, reflexo, rotundo.*

THE LEONINE MEGALOMASTOMA. Shell short, smooth, pupa-shaped, fulvous, solid, ventricose; whorls five, last large, keeled and umbilicated below; aperture large, subcircular, margin white, narrow, reflected, rounded.

PFEIFFER. Adams. Sowb. Thes. Conch. *Pupinidæ* (Megal.) Fig. 7.
Hab. Cuba.

A shorter shell than *M. tortum*, with the margin of the aperture not winged.

Species 75. (Mus. Brit.)

MEGALOMASTOMA FUNICULATUM. *Meg. testâ angustâ, purpureo-fuscâ, pupæformi, altâ; anfractibus sex, rectiùsculis, superioribus attenuatis; ultimo alto, rectilaterali, infrà subcarinatâ et umbilicatâ; aperturâ flavidâ, subauriformi, margine angustè reflexo, rotundo, integro.*

THE CHIMNEY-SHAPED MEGALOMASTOMA. Shell narrow, purple-brown, pupa-shaped, high; whorls six, rather straight, upper attenuated; last high, straight-sided, slightly keeled and umbilicated; aperture yellowish, rather auriform, margin narrowly reflected, rounded, entire.

BENSON. Adams. Sowb. Thes. Conch. Megalomastoma, Fig. 8.
Hab. Darjiling, India.

Species 76. (Mus. Brit.)

MEGALOMASTOMA BITUBERCULATUM. *Meg. testâ solidâ, altâ, ventricosâ, pupæformi; anfractibus sex, convexis, superioribus pallidis, inferioribus purpureis; suturâ profundissimâ; aperturâ circulari, margine latè reflexo; latere externo foliatim duplicato, apud anfractum ultimum rotundè bialato, post aperturam canaliculato.*

THE BITUBERCULATED MEGALOMASTOMA. Shell solid, high, ventricose, pupa-shaped; whorls six, convex, upper pale, lower purple; suture very deep; aperture circular, margin broadly reflected; outer side doubly foliated, roundly two-winged, with a canal behind the aperture.

SOWERBY. Adams. Sowb. Thes. Megalomastoma, Fig. 10.
Cyclostoma solenatum. Poey.
Hab. Cuba.

A bolder and more cylindrical shell than *Megalomastoma tortum*, with the alæ on the margin of the lip at the interrupted part rounded and conspicuous.

Megalomastoma.

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G.B Sowerby del et Lith

Vincent Brooks Day & Son Imp

PUPINIDÆ.

PLATE IX.

(*MEGALOMASTOMA.*).

Species 77. (Mus. Sowerby.)

MEGALOMASTOMA D'ORBIGNYI. *Meg. testâ oblongo-subcylindricâ, lævigatâ, omnino pallidè aurantiâ vel fusco-aurantiâ, anfractibus inferioribus fasciâ fuscâ latâ pictâ; anfractibus sex, primis rotundis, brevibus; medianis convexiùsculis, altis; ultimo altissimo, infrà prope aperturam carinato, angustè umbilicato; aperturâ anticè subproductâ, circulari, margine integro, rotundo.*

D'ORBIGNY'S MEGALOMASTOMA. Shell oblong-subcylindrical, smooth, all over pale orange or brown orange, with the lower whorls painted with a broad brown band; whorls six, the first rounded, short; middle rather convex, high; last very high, keeled below near the aperture, narrowly umbilicated; aperture anteriorly rather produced, circular, margin entire, rounded.

PFEIFFER. Adams. Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 12, 13.

Hab. Haïti, Peru.

Species 78. (Mus. Sowb.)

MEGALOMASTOMA SUSPENSUM. *Meg. testâ angustè pyramidatâ, obliquè striatâ, fumoso-fuscâ; anfractibus novem, gradatim crescentibus; ultimo alto, infrà umbilicato et carinato; aperturâ descendente, subovatâ, margine angusto, albo, planulato, ad suturam acuminato.*

THE SUSPENDED MEGALOMASTOMA. Shell narrowly pyramidal, obliquely striated, smoky-brown; whorls nine, gradually increased; last high, umbilicated and keeled below; aperture descending, rather ovate, margin narrow, white, flattened, acuminated at the suture.

GUILDING. Adams. Sowb. Thes. *Pupinidæ*, Megalomastoma, Fig. 14.

Cyclostoma Antillarum. Sowerby.

Hab. Isl. St. Thomas, Antilles.

Species 79. (Mus. ——? Copied:)

MEGALOMASTOMA VERRUCOSUM. *Meg. testâ brevi, subpyramidatâ, obscurè fulvâ, minutè nodulosâ; anfractibus sex, gradatim crescentibus, ultimo ante aperturam angustissimè umbilicato; aperturâ subrotundâ, margine albo, convexo.*

THE WARTED MEGALOMASTOMA. Shell short, rather pyramidal, dull brown, minutely nodose, whorls six, gradually increased, last very narrowly umbilicated before the aperture; aperture rather round, margin white, convex.

SHUTTLEWORTH. Adams. Sowb. Thes. *Pupinidæ*, Megalomastoma, Fig. 15.

Hab. Porto Rico.

Species 80. (Mus. Brit.)

MEGALOMASTOMA COMPLANATUM. *Meg. testâ solidâ, pupæformi, ventricosâ, fusco-purpureâ, ad suturam albo-lineatâ; anfractibus quinque, penultimo maximo, ultimo subcompresso; umbilico angustissimo; aperturâ magnâ, circulari; margine albo, crasso, apud anfractum ultimum partim interrupto.*

THE FLATTENED MEGALOMASTOMA. Shell solid, pupa-shaped, ventricose, brown-purple, with a white line at the suture; whorls five, penultimate very large; last a little compressed; umbilicus very narrow; aperture large, circular; margin white, thick, partly interrupted against the body-whorl.

PFEIFFER. Adams. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 16.

Hab. Cuba.

The last whorl is a little flattened in front.

Species 81. (Mus. Sowerby.)

MEGALOMASTOMA CROCEUM. *Meg. testâ ovato-acuminatâ, lævi, aurantiâ, vel pallidè fulvâ, anfractibus inferioribus fuscofasciatis; anfractibus septem, supernè angustioribus, infrà angustè umbilicatâ; aperturâ ovatâ, posticè angustiùsculâ, margine angusto, duplicato.*

THE YELLOW MEGALOMASTOMA. Shell ovate-acuminated, smooth, orange, or pale fulvous, with brown bands on the lower whorls; whorls seven, rather narrow above; below narrowly umbilicated; aperture ovate, posteriorly rather narrow, margin narrow, doubled.

SOWERBY. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 7.

Cyclostoma bifasciatum. Sowerby
Cyclostoma Gouldianum. Petri.
Hab. Mauritius. (Var. fasciatum.) Gnayaquil.

Species 82. (Mus. Sowerby.)

MEGALOMASTOMA MANI. *Meg. testâ subpyramidatâ, aureo-fulvâ, tenuiter striatâ, apice acuminato; anfractibus septem, superioribus quinque brevibus, rotundis, penultimo magno, ultimo magno, infrà umbilicato; aperturâ rotundâ, margine crasso, rotundo, suprà infràque prope anfractum ultimum paulò expanso.*

MAN'S MEGALOMASTOMA. Shell rather pyramidal, golden-fulvous, finely striated, apex acuminated; whorls seven, upper five short, round, penultimate large, last large, umbilicated below; aperture round, margin thick, rounded, a little expanded above and below near the last whorl.

POEY. Adams. Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 18.
Megalomastoma procerum (*var.*). Poey.
Hab. Cuba.

This species is not so cylindrical as *Megalomastoma tortum*, but tapers towards the apex.

Species 83. (Mus. Hanley.)

MEGALOMASTOMA ANASTOMA. *Meg. testâ breviter pyramidatâ, acuminatâ, purpureo-fuscâ; anfractibus sex, rapidè crescentibus; aperturâ magnâ, circulari; margine albo, expanso, apud anfractum ultimum interrupto.*

THE WRY-MOUTHED MEGALOMASTOMA. Shell shortly pyramidal, acuminated, purple-brown; whorls six, rapidly increased; aperture large, circular; margin white, expanded, interrupted against the last whorl.

BENSON. Adams. Sowb. Thes. *Pupinidæ*, Megalomastoma, Fig. 20.
Hab. India.

The peritreme is white and more broadly expanded than in *M. Lowei.*

Species 84. (Mus. ——? Copied.)

MEGALOMASTOMA GUILDINGIANUM. *Meg. testâ minutâ, brevi, pupæformi, anfractibus superioribus albis, apice obtuso; anfractibus quinque, brevibus, rotundis, penultimo inflato; ultimo intensè purpureo; vix contracto, umbilicato; aperturâ subcirculari, margine angusto, albo, rotundo.*

GUILDING'S MEGALOMASTOMA. Shell minute, short, pupa-shaped, upper whorls white, apex obtuse; whorls five, short, round, last but one inflated; last deep purple, a very little contracted, umbilicated; aperture nearly circular, margin narrow, white, rounded.

PFEIFFER. Adams. Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 21.
Hab. West Indies.

This minute shell is like a miniature representation of *M. tortum.*

Species 85. (Mus. ——? Copied.)

MEGALOMASTOMA PAUPERCULUM. *Meg. testâ minutâ, pupæformi, altiùsculâ, anfractibus superioribus albis, convexis; spirâ acuminatâ, medio convexâ; anfractibus sex, convexiùsculis, penultimo inflato, ultimo subcontracto, umbilicato, intensè purpureo; aperturâ circulari, margine albo, duplicato.*

THE POOR LITTLE MEGALOMASTOMA. Shell minute, pupa-shaped, rather high, with the upper whorls white, convex; spire acuminated, middle convex; whorls six, rather convex, last but one inflated, last rather contracted, umbilicated, deep purple; aperture circular, margin white, double.

PFEIFFER. Adams. Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 22.
Hab. West Indies.

Resembling *M. Guildingianum* in size and general appearance, but more acuminated, and with the rim doubled.

Species 86. (Mus. Sowerby.)

MEGALOMASTOMA ALTUM. *Meg. testâ angustè pyramidatâ, purpureo-fuscâ, lævigatâ; anfractibus septem convexis, ultimo alto, umbilicato; aperturâ subcirculari, margine duplicato, albo.*

THE HIGH MEGALOMASTOMA. Shell narrowly pyramidal, purple-brown, smooth; whorls seven, convex, last high, umbilicated; aperture rather circular, margin doubled, white.

SOWERBY. Adams. Thes. Conch. *Pupinidæ.*
Hab. Isl. Negroes.

Megalomastoma.

87.

88.

89.

90.

91

92.

Raphaulus.

93.

94.

95.

96.

97.

G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

PUPINIDÆ.

PLATE X.

Species 87. (Mus. Brit.)

MEGALOMASTOMA UNGULA. *Meg. testâ albâ, solidâ, pupæformi, anfractibus sex, convexis, suturâ profundâ separatis, ultimo angustissimè umbilicato; aperturâ anticè obliquè productâ, bimarginatâ, margine interiori ultra exteriorem obliquè extenso.*

THE TALON MEGALOMASTOMA. Shell white, solid, pupa-shaped, whorls six, convex, separated by a deep suture; last very narrowly umbilicated; aperture anteriorly obliquely produced, with a double margin, interior margin extended obliquely beyond the outer.

POEY. Adams, Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 29.

Hab. Cuba.

The mouth is bordered by a kind of double rim, the inner rim being, as it were, pushed out obliquely in front, so as to overlap what would otherwise be the outer.

Species 88. (Mus. Brit.)

MEGALOMASTOMA SECTILABRUM. *Meg. testâ pyramidatâ, altâ, acuminatâ, pallidissimè fulvâ; anfractibus octo, lævibus, convexiùsculis, declivibus; ultimo infrà unifasciato, tum angustissimè umbilicato; aperturâ subovatâ, margine duplicato, parte exteriori ad anfractum ultimum interruptâ, interiori integrâ.*

THE SLIT-LIPPED MEGALOMASTOMA. Shell pyramidal, raised, acuminated, very pale fulvous; whorls eight, smooth, convex, sloped; last single-banded, very narrowly umbilicated; aperture rather ovate, margin duplicated, the outer part being interrupted at the body whorl, the inner part entire.

GUILDING. Adams, Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 24.

Hab. Tavoy, Birmah.

Species 89. (Mus. ——? Copied.)

MEGALOMASTOMA VENTRICOSUM. *Meg. testâ solidâ, ventricosissimâ, brevi, fusco-rubescenti; anfractibus quinque, convexis, latis; penultimo inflato; ultimo purpurascenti, infrà subangustato, profundè umbilicato; aperturâ magnâ, circulari; margine crasso, aurantio, rotundo, apud anfractum ultimum partim interrupto.*

THE VENTRICOSE MEGALOMASTOMA. Shell solid, very ventricose, short, reddish-brown; whorls five, convex, broad; penultimate inflated; last rather purplish, a little narrowed below, deeply umbilicated; aperture large, round; margin thick, orange, round, partly interrupted at the last whorl.

D'ORBIGNY. Adams, Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 25.

Hab. Cuba.

Much more short and ventricose than *Meg. tortum.*

Species 90. (Mus. Brit.)

MEGALOMASTOMA GUNDLACHI. *Meg. testâ brevi, pupæformi, aurantio-fuscâ; apice obtuso; anfractibus quinque, tribus superioribus rotundis, penultimo magno, rectiùsculo, ultimo altissimo, recto, infrà carinato, umbilicato; aperturâ maximâ, circulari, margine crasso, rotundo, apud anfractum ultimum semi-interrupto.*

GUILDING'S MEGALOMASTOMA. Shell short, pupa-shaped, orange-brown; apex obtuse; whorls five, three upper rounded, penultimate large, rather straight, last very high, straight, keeled below, umbilicated; aperture very large, circular, margin thick, rounded, half interrupted against the last whorl.

PFEIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 26.

Hab. Cuba.

Species 91. (Mus. Brit.)

MEGALOMASTOMA CYLINDRACEUM. *Meg. testâ altissimâ, cylindricâ, aurantiâ (nonnunquam ultimo anfractu unifasciato), versus apicem attenuatâ; anfractibus octo, altis, rectis; aperturâ ovatâ, margine albo, angusto.*

THE CYLINDRICAL MEGALOMASTOMA. Shell very high, cylindrical, orange, sometimes with the last whorl single-banded, attenuated towards the apex; whorls eight, high, straight; aperture ovate, margin white, narrow.

CHEMNITZ. Adams, Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 27.

Turbo flavidus. Wood.

Helix cocea. Gmelin.

Cyclostoma flavida.

Hab. Porto Rico.

More elevated and cylindrical than *M. D'Orbignyi.*

Species 92. (Mus. Sowb.)

MEGALOMASTOMA SEROTINA. *Meg. testâ ovato-subpyramidatâ, ventricosâ, lævigatâ, subacuminatâ, fulvâ; anfractibus sex, convexiùsculis, ultimo magno, infrà carinato, angustè umbilicato, aperturâ subrotundâ, anticè obliquè productâ, margine crasso, duplicato, parte interiorem anticè ultra exteriorem extenso.*

THE EVENING MEGALOMASTOMA. Shell ovate-subpyramidal, ventricose, smooth, rather acuminated, fulvous; whorls six, rather convex, last large, keeled below, narrowly umbilicated; aperture rather rounded, anteriorly obliquely produced, margin thick, double, inner part extended in front beyond the outer.

ADAMS. Sowb. Thes. Conch. *Pupinidæ*, Megalomastoma, Fig. 28.

Hab. Cuba.

(*RAPHAULUS.*)

Species 93. (Mus. —— ? Copied.)

RAPHAULUS BOMBAZINUS. *Rap. testâ breviter pupæformi, fusco-subaureâ, apice acuminato; anfractibus septem, quinque superioribus parvis, brevibus, pyramidatis, penultimo breviùsculo, rotundè prominenti, ultimo magno, rectiùsculo; aperturâ magnâ, rotundâ, margine lato, circulariter canaliculato; tubâ rotundâ brevissimâ.*

THE BOMBAZINE RAPHAULUS. Shell shortly pupæform, golden-brown; apex acuminated, whorls seven, five upper small, short, pyramidal; penultimate rather short, roundly prominent, last large, rather straight; aperture large, round, margin broad, circularly channelled; tube round, very short.

PFEIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Raphaulus, Fig. 3, 7.

Hab. India.

Species 94. (Mus. —— ? Copied.)

RAPHAULUS SIMILIS. *Rap. testâ brevissimè pupæformi, fusco-subaureâ; apice obtuso; anfractibus quinque, tribus superioribus brevissimis, penultimo brevi, inflato; ultimo ventricoso, alto, obliquo; aperturâ magnâ, rotundâ, margine lato, circulariter canaliculatâ; tubâ rotundâ, brevissimâ.*

THE SIMILAR RAPHAULUS. Shell very shortly pupa-shaped, golden brown; apex obtuse; whorls five, three upper very short, penultimate short, inflated, last ventricose, high, oblique; aperture large, rounded, margin broad, with a circular canal; tube rounded, very short.

SOWERBY.

Hab. —— ?

In the monograph of Pupinidæ by Mr. Arthur Adams, this species is given as a second example of the preceding. It is, however, much shorter and more obtuse in the spire.

Species 95. (Mus. Hanley.)

RAPHAULUS CHRYSALIS. *Rap. testâ breviter pupæformi, solidâ, purpureo-fuscâ; apice obtuso, anfractibus quinque, tribus superioribus brevibus, penultimo alto, rotundè prominenti; ultimo alto, obliquo; aperturâ magnâ, circulari, margine lato, circulariter canaliculato; tubâ elongatâ, perpendiculariter super anfractum ultimum decumbenti.*

THE CHRYSALIS RAPHAULUS. Shell shortly pupa-shaped, solid, purple-brown; apex obtuse, whorls five, three upper short, last but one elevated, roundly prominent; last elevated, oblique; aperture large, circular, margin broad, with a circular channel, tube elongated, perpendicularly decumbent upon the last whorl.

PFEIFFER. Proc. Zool. Soc. 1852, p. 158.

Hab. Ava, Moulmein.

The tube runs up the side of the last whorl, nearly reaching the suture.

Species 96. (Mus. Brit.)

RAPHAULUS LORAINII. *Rap. testâ breviter pupæformi, solidâ, purpureo-fuscâ, ultimo anfractu albo suprà, ad suturam unifasciato; apice obtuso; anfractibus quinque, brevibus, penultimo rotundè prominenti, ultimo rectiùsculo; aperturâ magnâ, circulari, margine albo, reflexo, rotundo; tubâ brevissimâ, extra marginem apertâ.*

LORAINE'S RAPHAULUS. Shell shortly pupa-shaped, solid, purple-brown, last whorl with a single white band above the suture; whorls five, short, last but one roundly prominent; last rather straight; aperture large, circular, margin white, reflected, rounded; tube very short, open beyond the margin.

PFEIFFER. Proc. Zool. Soc. 1852.

Hab. Pulo Penang.

Resembling *R. bombycinus* and *R. similis*, but with no groove round the margin of the aperture.

Species 97. (Fig. *a*, *b*, Mus. Hanley.)

RAPHAULUS BLANFORDI. *Rap. testâ brevissimâ, ventricosâ, fuscâ; apice sub-pyramidatâ; anfractibus quinque, duobus apicalibus parvis, brevibus, penultimo inflato, ultimo brevi, subinflato; aperturâ circulari, margine crasso, albo; tubâ retrorsum plicatâ, longè super suturam ad dorsum productâ.*

BLANFORD'S RAPHAULUS. Shell very short, ventricose, brown; apex rather pyramidal; whorls five; two apical small, short, last but one inflated, last short, rather inflated; aperture circular, margin thick, white; tube bent backwards, produced to some length over the suture at the back.

BENSON. An. Nat. Hist. 1857. p. 201.

Hab. Near Darjiling, in Sikkim, Himalaya.

PUPINIDÆ.

	Plate.	Species.
Adamsii. Pu. *Sowerby*	IV.	33
altum. M. *Sowerby*	IX.	86
alutaceum. M. Menke	VIII.	71
ambigua. Ca. *Semper*	IV.	37
anastoma. M. *Benson*	IX.	83
Angasii. Pu. *Adams*	II.	14
apertum. M. Poey	VIII.	71
artata. Pu. *Benson*	I.	3
arula. Pu. *Benson*	I.	5
aurea. Pu. *Hinds*	I.	10
aureus. Cat. *Hanley*	VII.	65
auriculatum. M. D'Orbigny	VIII.	71
aurita. Ca. *Zeigler*	IV.	36
Austenianus. Cat. *Benson*	VII.	59
bicanaliculata. Pu. *Sowerby*	II.	11
bicolor. M. Guilding	VIII.	71
bilinguis. Pu. *Pfeiffer*	I.	1
bituberculatum. M. *Sowerby*	VIII.	76
Blanfordi. Cat. *Dohrn*	VI.	53
Blanfordi. Pu. *Theobald*	I.	6
Blanfordi. Ra. *Benson*	X.	97
Bombeyana. Ra. *Pfeiffer*	X.	93
Borneensis. Pu. Pfeiffer	II.	19
Brazieri. Re. *Crosse*	V.	47
calcadensis. Cat. *Beddome*	VI.	50
chrysalis. Ra. *Pfeiffer*	X.	95
complanatum. M. *Pfeiffer*	IX.	80
complanatum. Re. *Pease*	V.	46
croceum. M. *Sowerby*	IX.	81
Cumingiana. Re. *Pfeiffer*	V.	41
Cumingii. Cat. *Pfeiffer*	VI.	52
cylindraceum. M. *Chemnitz*	X.	91
decorus. Cat. *Benson*	VII.	64
difficilis. Pu. *Semper*	IV.	32
Digitale. M. Gundlach	VIII.	71
D'Orbignyi. M. *Pfeiffer*	IX.	77
duplicatus. Cat. *Pfeiffer*	VI.	51
euryptrema. Cat. *Pfeiffer*	VI.	56
exiguum. Re. *Sowerby*	V.	39
funiculum. *M. Benson*	VIII.	75
fuscum. Re. *Gray*	V.	43
grande. Re. *Gray*	V.	42
grandis. Pu. *Forbes*	I.	4
gravida. Po. *Benson*	VIII.	68
Guatemalense. M. *Pfeiffer*	VIII.	73
Guildingianum. M. *Pfeiffer*	IX.	84
Gundlachi. M. *Pfeiffer*	X.	90
hæmastomus. Cat. *Pfeiffer*	VII.	61
humilis. Pu. *Adams*	II.	16
idolum. M. Ferrussac	VIII.	71
imbricifera. Pu. *Benson*	I.	7
Keraudreni. Pu. *Vignal*	II.	12
Layardi. Cat. *Adams*	VI.	57
leucocheilus. Cat. *Adams*	VII.	63
leoninum. M. *Pfeiffer*	VIII.	74
Lorainii. Ra. *Pfeiffer*	X.	96
Lowei. M. Adams	VIII.	70
lubrica. Ca. *Sowerby*	IV.	35
Mani. M. *Poey*	IX.	82
marginatus. Cat. *Pfeiffer*	VII.	58
meridionalis. Pu. *Pfeiffer*	I.	8
Mindoroensis. Pu. *Adams* and *Reeve*	III.	28
minus. Ar. *Sowerby*	VII.	66
mitis. Pu. *Adams*	III.	23
Mouhoti. Pu. *Pfeiffer*	II.	13
Mouhoti. Po. *Pfeiffer*	VIII.	67
Moulinsiana. Pu. *Fischer*	II.	15
Myersii. Pu. *Haines*	VIII.	69
nicobarica. Pu. *Pfeiffer*	III.	26
Nieteri. Cat. *Hanley*	VI.	48
ottonis. Pu. *Dorhn*	III.	25
pauperculum. M. *Pfeiffer*	IX.	85
pellucidum. Re. *Gray*	V.	45
Pfeifferi. Pu. *Dohrn*	III.	21
pineticola. Pu. *Cox*	IV.	31
planilabris. Pu. *Pfeiffer*	I.	9
polita. Har. *A. Adams*	III.	29
procera. M. Poey	IX.	82
pupinæformis. Pu. *Pfeiffer*	II.	20
pyramidatus. Cat. *Pfeiffer*	VII.	60

	Plate.	Species.
recurvatus. Cat. *A. Adams*	VI.	55
rufa. Pu. *Pfeiffer*	III.	27
sectilabrum. M. *Guilding*	X.	88
seminudum. M. Poey	VIII.	71
serotina. M. *Adams*	X.	92
simile. Re. *Gray*	V.	44
similis. Ra. *Sowerby*	X.	94
simulacrum. M. *Morelet*	VIII.	72
splendens. *Dorhn*	IV.	35
Strangei. Pu. *Pfeiffer*	III.	24
superba. Pu. *Pfeiffer*	II.	17
suspensum. M. *Guilding*	IX.	78
Swinhoei. Pu. *A. Adams*	IV.	30
Taylorianum. M. Pfeiffer	VIII.	71
Templemani. Cat. *Pfeiffer*	VII.	62
Thompsoni. Pu. *Forbes*	III.	22
Thwaitesii. Cat. *Pfeiffer*	VI.	54
tortum. M. *Wood*	VIII.	71
tortuosus. Cat. *Gray*	VI.	49
ungula. M. *Poey*	X.	87
ventricosum. M. *Gundlach*	X.	89
ventricosa. Pu. *Dohrn*	I.	2
verrucosulum. M. *Shuttleworth*	IX.	79
Vescoi. Pu. *Morelet*	II.	18
vitreum. Re. *Sowerby*	V.	40
Wallacei. Ca. *Pfeiffer*	IV.	38

MONOGRAPH

OF THE GENUS

GASTROCHENA.

"Contrivance intricate, expressed with ease
Where unassisted sight no beauty sees."—*Cowper.*

1a

2.

3.

1b

4.

5.

1c

G.B. Sowerby del. et lith.

Vincent Brooks Day & Son Imp.

GASTROCHÆNA.

PLATE I.

Genus GASTROCHÆNA. *Lamarck.*

MOLLUSCUM ACEPHALOPODUM, PERFORANS, TUBICOLUM. *Testa bivalvis, inæquilateralis, æquivalvis, anticè ad marginem ventralem latè hians, umbonibus anticè ferè terminalibus; cardo dentibus plerumque subinconspicuis; ligamentum externum; tuba nonnunquam ferè libera.*

MOLLUSK ACEPHALOPODE, perforating, tube-inhabiting. Shell bivalve, inequilateral, equivalve, widely gaping in front at the ventral margin, umbones almost terminal in front; hinge for the most part with inconspicuous teeth; ligament external; tube sometimes nearly free.

The Gastrochænæ for the most part live, like the Pholades, in hollows which they bore in limestone rocks, and which they line with a shelly tube ending in a narrow neck, like a bottle. But some of them, like the *Gastrochæna dubia*, make an almost independent tube, only attached by the neck or by one side to the shell or rock through which they have bored, or to which they are otherwise fixed. There is a specimen in the British Museum of *G. dubia* in which the substance bored through and slenderly lined is crystallized carbonate of lime. The British species is common to France and many other European coasts. The Indias, East and West, the Gallapagos Islands, the Mauritius, South America, the Pacific Islands, produce many species, and a small number were described by the late M. Deshayes, when in London some years since, which had been collected by the late Mr. Cuming in the Philippines.

Species 1. (Fig. *a*, *b*, *c*. Mus. Brit.)

GASTROCHÆNA DUBIA. *Gas. testâ tenui, elongatâ, obliquâ, tenuiter striatâ; hiatu ventrali mediocri, prope medium terminanti; cardine tenui, ferè edentulo.*

THE DOUBTFUL GASTROCHÆNA. Shell thin, elongated, oblique, finely striated; ventral hiatus moderate, terminating near the middle; hinge thin, almost without teeth.

PENNANT. British Zoology.

Gastrochæna modiolina. Lamarck.

ROCELLARIA DUBIA. Adams.

Hab. British Mediterranean coasts.

The bottle-shaped tube which covers the valves and syphons of this species is composed, when free, of agglutinated sand and small pebbles; when enclosed, it forms a calcareous lining to the crypt.

Species 2. (Mus. Brit.)

GASTROCHÆNA PLICATILIS. *Gas. testâ subcompressâ, epidermide fuscâ indutâ, tortuâ, areâ posticâ elevatâ, contabulatâ, sulcato-rugatâ, ad terminum truncatâ, areâ dorsali depressâ, rectiùsculâ, areâ mediânâ posticè in sulcum obliquum terminanti; hiatu elongato.*

THE PLAITED GASTROCHÆNA. Shell sub-compressed, covered with a brown epidermis, tortuous, with the posterior area elevated, contabulated, wrinkled with sulci, truncated at the end, dorsal area depressed, rather straight, middle area posteriorly terminating in an oblique groove; hiatus elongated.

DESHAYES. Proc. Zool. Soc. 1854, p. 329.

Hab. Isl. Zebu, Philippines.

The shell very much resembles *G. rostrata*, but the plaits on the posterior area are finer, and less deeply cut, and the dorsal area much less projecting.

Species 3. (Mus. Brit.)

GASTROCHÆNA BREVIS. *Gas. testâ inflatâ, brevi, solidiùsculâ, lævigatâ, anticè gibbosâ, hiatu valdè arcuato, brevi.*

THE SHORT GASTROCHÆNA. Shell inflated, short, rather solid, rather smooth, gibbous anteriorly; hiatus strongly arched, short.

SOWERBY. Proc. Zool. Soc. 1834. 21.

Hab.—— ?

Species 4. (Mus. Brit.)

GASTROCHÆNA APERTISSIMA. *Gas. testâ elongatâ, subcompressâ; tenuiter striatâ; latere antico cuneato; latere postico rectiùsculo, ad terminum rotundè subacuminato; hiatu lato et elongato, ferè ad terminum posticum extenso.*

THE WIDE OPEN GASTROCHÆNA. Shell elongated, rather compressed, finely striated; anterior side cuneated; posterior side rather straight, roundly subacuminated; hiatus broad and elongated, almost extending to the posterior end.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab.——?

Species 5. (Mus. Brit.)

GASTROCHÆNA DIFFICILIS. *Gas. testâ obliquâ, tenuiter striatâ, compressâ, cuneiformi, anticè gibbosâ, angustâ, posticè latâ, ad terminum acuminatâ; hiatu lato, paulò post medium extenso.*

THE DIFFICULT GASTROCHÆNA. Shell oblique, finely striated, compressed, cuneiform, anteriorly gibbous, narrow; posteriorly broad, acuminated at the end; hiatus broad, extended nearly to the end.

DESHAYES. MS. in Cuming's Collection.

Hab. Isl. St. Thomas.

A rather cuneiform species, but more depressed than the one so named.

6a

7.

6b

8.

9a

10.

11.

9b

G.B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp.

GASTROCHÆNA.

PLATE II.

Species 6. (Mus. ——?)

GASTROCHÆNA RETZII. *Gas. testâ oblongâ, subcuneiformi, anticè attenuatâ, inflatâ, tenui; epidermide flavescenti indutâ; latere postico latè truncato; areâ posticâ trigonâ, elevatâ; areâ dorsali depressâ, angustâ; hiatu maximo, latissimo, ferè ad terminum posticum extenso.*

RETZIUS'S GASTROCHÆNA. Shell oblong, rather cuneiform, anteriorly attenuated, inflated, thin; covered with a yellowish epidermis; posterior side broadly truncated; posterior area trigonal, raised; dorsal area depressed, narrow; hiatus very large, very broad, extended almost to the posterior termination.

DESHAYES. Conch. île Réunion, p. 7.

Hab. Isl. Bourbon.

Species 7. (Mus. Sowerby.)

GASTROCHÆNA PHILIPPINENSIS. *Gas. testâ angustâ, rectiùsculâ, tenui, tenuiter et distanter elevato-striatâ; latere antico acuminato, latè hiante; latere postico subacuminato.*

THE PHILIPPINE GASTROCHÆNA. Shell narrow, rather straight, thin, with fine, raised, distant striæ, anterior side acuminated, broadly gaping; posterior side rather acuminated.

DESHAYES. Proc. Zool. Soc. 1854, p. 328.

Hab. Isl. Zebu, Philippines.

Species 8. (Mus. Brit.)

GASTROCHÆNA DENTICULATA. *Gas. testâ brevi, altâ, inflatâ; medio subdepressâ; latere antico ante umbonem paulò producto, obliquè striis elevatis minutissimè denticulatis sculpto; hiatu mediocri.*

THE DENTICULATED GASTROCHÆNA. Shell short, high, inflated; slightly depressed in the middle; anterior side a little produced in front of the umbones, sculptured obliquely with raised, very minutely denticulated striæ; hiatus moderate.

DESHAYES. Proc. Zool. Soc. 1856, p. 328.

Hab. W. Columbia.

The sculpture in the front part of this shell is sufficient to distinguish the species.

Species 9. (Mus. Sowerby.)

GASTROCHÆNA CUCULLATA. *Gas. testâ cuneiformi, crassâ; latere antico brevissimo, angustissimo; latere postico latè expanso, versus terminum cucullato; hiatu ovato, mediocri; cardine dentibus magnis.*

THE HOODED GASTROCHÆNA. Shell cuneiform, thick; anterior side very short, very narrow; posterior side broadly expanded, hooded towards the end; hiatus ovate, moderate; hinge with large teeth.

DESHAYES. Proc. Zool. Soc. 1856, p. 329.

Hab. W. Indies.

A large and remarkable species, with a peculiar hollow convexity in the valves towards the posterior end.

Species 10. (Mus. Brit.)

GASTROCHÆNA ROSTRATA. *Gas. testâ subcompressâ, tortuosâ, oblongâ, epidermide fuscâ indutâ; latere antico ante umbones producto, prope terminum rugato; hiatu maximo, ferè ad terminum posticum extenso; latere postico trigono, angulato, ante angulum depresso; areâ posticâ elevatâ, contabulatâ, profundè rugatâ; ad terminum latè truncatâ; areâ dorsali latâ, expansâ; ligamento magno, brevi.*

THE ROSTRATED GASTROCHÆNA. Shell rather compressed, tortuous, oblong, covered with a brown epidermis; anterior side produced in front of the umbones, wrinkled near the end; hiatus very

large, almost extending to the end; posterior side trigonal, angular, depressed in front of the angle; posterior area elevated, contabulated, deeply wrinkled, broadly truncated at the end; dorsal area broad, expanded; ligament large, short.

Spengler. Guerin, Mag. Hist. Nat.

Hab. Isl. St. Thomas.

Species 11. (Mus. Brit.)

Gastrochæna Rupellii. *Gas. testâ crassâ, subovatâ, inflatâ, latere antico ante umbones subproducto, quam posticum angustiùsculo, tenuiter striato, umbonibus tumidissimis; medio lævigato, striato; latere postico validè concentricè striato; hiatu ventrali moderatè arcuato.*

Rupell's Gastrochæna. Shell thick, subovate, inflated, anterior side rather produced in front of the umbones, narrower than the posterior, finely striated; umbones very tumid; middle smooth, striated; posterior side strongly concentrically striated; ventral hiatus moderately arched.

Deshayes. Proc. Zool. Soc. 1854, p. 328.

Hab. Red Sea.

12.

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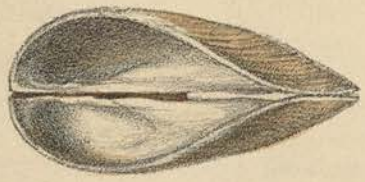
15a.

16a.



15b

16b.

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C.B. Sowerby del et lith.

Vincent Brooks Day & Son Imp.

GASTROCHÆNA.

PLATE III.

Species 12. (Mus. Brit.)

GASTROCHÆNA MYTILOIDES. *Gas. testâ compressâ, epidermide flavescenti indutâ, oblongâ, tortuosâ; latere antico ante umbones producto, acuminato; latere postico ante aream depresso, areâ posticâ contabulatâ, distanter sulcatâ; areâ dorsali angustâ.*

THE MYTILUS-SHAPED GASTROCHÆNA. Shell compressed, covered with a yellowish epidermis, oblong, tortuous; anterior side produced in front of the umbones, acuminated; posterior side depressed in front of the area, posterior area contabulated, distantly grooved; dorsal area narrow.

LAMARCK. Anim. s. Vert.

Hab. —— ?

Resembling *Gastrochæna rostrata*, but with dorsal area very narrow, and posterior flattened area grooved at distant intervals.

Species 13. (Mus. Brit.)

GASTROCHÆNA RUGULOSA. *Gas. testâ depressâ, obliquè cuneiformi, elongatâ, anticè angustâ, subacuminatâ, posticè concentricè distanter liratâ; hiatu mediocri.*

THE WRINKLED GASTROCHÆNA. Shell depressed, obliquely cuneiform, lengthened, narrow in front, rather acuminated, posteriorly concentrically distantly ridged; gape moderate.

SOWERBY. Proc. Zool. Soc. 1834, p. 22.

Hab. Gallapagos Islands.

Species 14. (Mus. Brit.)

GASTROCHÆNA LAMELLOSA. *Gas. testâ compressâ, angustâ, elongatâ, anticè attenuatâ, acuminatâ, posticè concentricè laminis crebris liratâ; hiatu ventrali angusto, elongato.*

THE LAMELLATED GASTROCHÆNA. Shell compressed, narrow, elongated, anteriorly attenuated, acuminated, posteriorly concentrically ridged with frequent laminæ, ventral hiatus narrow, long.

DESHAYES. Proc. Zool. Soc. 1854, p. 328.

Hab. Isl. Zebu, Philippines.

Species 15. (Mus. Brit.)

GASTROCHÆNA GIGANTEA. *Gas. testâ elongato-ovatâ, utrinque acuminatâ, tenuiter densè striatâ, medio leviter depressâ; hiatu latissimo, ferè ad terminum posticum valvarum extenso.*

THE GIGANTIC GASTROCHÆNA. Shell elongated-ovate, acuminated at each end, finely densely striated, slightly depressed in the middle; hiatus very broad, extending nearly to the end of the valves.

DESHAYES. MS. in Cuming's Collection.

Hab. —— ?

This large species is named from specimens now in the British Museum. The valves are more regularly ovate, although acuminated at the end and lengthened, than those of *G. cuneiformis*.

Species 16. (Mus. Brit.)

GASTROCHÆNA OVATA. *Gas. testâ ventricosissimâ, brevi, ovatâ, solidâ, anticè et usque ad medium concentricè striatâ, post medium lævigatâ, prope marginem dorsalem obliquè tumidâ et validè concentricè striatâ; hiatu ventrali subrotundo.*

THE OVATE GASTROCHÆNA. Shell very ventricose, short, ovate, solid, anteriorly and as far as the middle concentrically striated, past the middle smooth, near the dorsal margin obliquely tumid, and strongly concentrically striated; ventral hiatus rather round.

SOWERBY. Proc. Zool. Soc. 1834, p. 21.

Hab. Panama.

Species 17. (Mus. Brit.)

GASTROCHÆNA PUPINA. *Gas. testâ valvulis ignotis: tubâ lævi, angustè bulbiformi, in sectiones quinque quasi articulatâ, per latus ad testas adhærenti.*

THE PUPINA GASTROCHÆNA. Shell with valves unknown; tube smooth, narrowly bulb-shaped, quasi-articulated in five sections, attached by the side to shells.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.
Hab.——?

This may be only a smooth variety of the *Gastrochæna lagenula;* but I have not seen the valves.

Species 18. (Fig. *a*, *b*. Mus. Sowerby.)

GASTROCHÆNA LAGENULA. *Gas. testâ parvâ, arcuatâ, tenui, angustâ; areâ posticâ in tabulas divisâ, inter tabulas sulcatâ. Tubâ irregulariter bulbiformi, agglutinanti, quasi articulatim divisâ.*

THE FLASK GASTROCHÆNA. Shell small, arched, thin, narrow; posterior area divided in tablets, with grooves between the tablets. Tube irregularly bulbiform, agglutinating, divided into quasi-articulations.

LAMARCK. Anim. *s.* Vert.
Hab. Ceylon, Arracan.

In Adams's Genera, this and the preceding species are included in the genus Guettera. The valves of *G. lagenula*, however, are those of a true *Gastrochæna*, while those of *Guettera* have the characteristics of true *Teredines*.

Species 19. (Mus. Brit.)

GASTROCHÆNA TRUNCATA. *Gas. testâ rugosâ, solidiùsculâ, epidermide fuscâ indutâ; latere antico subattenuato, umbonibus gibbosis; latere postico angulato, latè truncato; areâ dorsali depressâ; hiatu lato, elongato; dente cardinali magno.*

THE TRUNCATED GASTROCHÆNA. Shell rugose, rather solid, covered with a brown epidermis; anterior side rather attenuated, umbones gibbous; posterior side angular, broadly truncated; dorsal area depressed; hiatus broad, elongated; cardinal tooth large.

SOWERBY. Proc. Zool. Soc. 1834, p. 21.
Hab. Bay of Panama.

Species 20. (Fig. *a*. Mus. Brit. Fig. *b*, Plate IV., Mus. Sowerby.)

GASTROCHÆNA CUNEIFORMIS. *Gas. testâ cuneiformi, tenuiùsculâ, anticè attenuatâ, ante umbones subproductâ, acuminatâ; latere postico lato, versus terminum obliquè subacuminato; hiatu moderatè elongato.*

THE WEDGE-SHAPED GASTROCHÆNA. Shell wedge-shaped, rather thin, anteriorly attenuated, a little produced in front of the umbones, acuminated; posterior side broad, obliquely rather acuminated, towards the end. Hiatus moderately long.

SPENGLER. Guerin, Mag. Nat. Hist.
Hab. Isl. Zebu, Philippines.

20b

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G. B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp.

GASTROCHÆNA.

PLATE IV.

Species 20. (F. b. See Plate III.)

Species 21. (Mus. Brit.)

GASTROCHÆNA HYALINA. *Gas. testâ tenuissimâ, semi-pellucidâ, obliquè attenuatâ, anticè brevissimâ, angustissimâ, posticè latiùsculâ, acuminatâ; hiatu breviùsculo.*

THE HYALINE GASTROCHÆNA. Shell very thin, semi-pellucid, obliquely attenuated, anteriorly very short, posteriorly rather broader, acuminated; hiatus rather short.

SOWERBY. Proc. Zool. Soc. 1834, p. 22.

Hab.—— ?

Species 22. (Mus. Brit.)

GASTROCHÆNA SPATHULATA. *Gas. testâ tenuissimâ, compressâ, cuneiformi, posticè rugatâ, truncatâ; umbonibus terminalibus; hiatu angustiùsculo, elongato.*

THE SPATULATE GASTROCHÆNA. Shell very thin, compressed, wedge-shaped, posteriorly wrinkled, truncated; umbones terminal; hiatus rather narrow, elongated.

DESHAYES. Proc. Zool. Soc. 1854, p. 229.

Hab. Isl. Bohol, Philippines.

Species 23. (Mus. Brit.)

GASTROCHÆNA IMPRESSA. *Gas. testâ subovatâ, tenui, tenuiter striatâ, utrinque acuminatâ, posticè obliquè sulco depressâ; hiatu lato, elongato, ferè ad terminum valvæ extenso.*

THE IMPRESSED GASTROCHÆNA. Shell rather oval, thin, finely striated, acuminated at each end; posteriorly obliquely depressed with a groove; hiatus broad, elongated, nearly extended to the end of the valve.

DESHAYES. Proc. Zool. Soc. 1854, p. 322.

Hab. —— ?

Species 24. (Mus. Brit.)

GASTROCHÆNA LÆVIGATA. *Gas. testâ ventricosâ, brevi, obliquè cuneiformi, lævigatâ, cæruleo-albâ; latere postico subacuminato; hiatu brevi, angustiùsculo.*

THE SMOOTH GASTROCHÆNA. Shell ventricose, short, obliquely cuneiform, smooth, bluish white, posterior side rather acuminated; hiatus short, rather narrow.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab. —— ?

Species 25. (Mus. Brit.)

GASTROCHÆNA HUMILIS. *Gas. testâ ventricosâ, brevi, obliquè cuneiformi, tenuiter concentricè striatâ; latere postico subacuminato; hiatu brevi, angustiùsculo.*

THE HUMBLE GASTROCHÆNA. Shell ventricose, short, obliquely cuneiform, finely concentrically striated; posterior side rather acuminated; hiatus short, rather narrow.

DESHAYES. Proc. Zool. Soc. 1854, p. 327.

Hab. St. Vincent.

Species 26. (Mus. Brit.)

GASTROCHÆNA INTERSECTA. *Gas. testâ brevi, latâ, subcompressâ, laminis concentricis numerosis subdistantibus et alteris intermediis minoribus tenuiter sculptâ; latere antico angustissimo, brevi; latere postico lato, margine dorsali elevato, margine terminali subrotundato.*

THE INTERSECTED GASTROCHÆNA. Shell short, broad, rather compressed, sculptured with numerous rather distant and other intermediate smaller concentric laminæ; anterior side very narrow, short; posterior side broad, dorsal margin raised, terminal margin rather rounded.

DESHAYES. Proc. Zool. Soc. 1854, p. 327.

Hab. —— ?

The larger concentric ridges are a little distant, and the intervals are filled up with smaller raised striæ.

Species 27. (Mus. Brit.)

GASTROCHÆNA TENERA. *Gas. testâ tenuissimâ, elongatâ, angustâ, compressâ, tenuissimè striatâ, modioliformi, post medium obliquè vix conspicuè sulcatâ; hiatu angustiùsculo, elongato.*

THE THIN GASTROCHÆNA. Shell very thin, elongated, narrow, compressed, very finely striated, shaped like a modiola, with scarcely conspicuous oblique sulcus; hiatus very narrow, elongated.

DESHAYES. Proc. Zool. Soc. 1854, p. 327.

Hab. Philippine Islands.

Species 28. (Mus. Brit.)

GASTROCHÆNA INTERRUPTA. *Gas. testâ angustâ, rectiùsculâ, elongatâ, subdepressâ, tenuissimâ, lævigatâ; areâ posticâ elevatâ, sulcis concentricis tribus vel quatuor divisâ; hiatu elongato-ovatâ, posticè abruptè terminanti.*

THE INTERRUPTED GASTROCHÆNA. Shell narrow, rather straight, elongated, rather depressed, very thin, smooth; posterior area raised; divided by three or four grooves; hiatus elongate-oval, posteriorly abruptly terminating.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab. Philippine Islands.

The valves of this species resemble those of *Gastrochæna lagenula*, but are very much more arched. The grooves, by which the posterior area is divided into a series of tablets, have probably, in the latter species, some connection with the exterior partitions of the tube. We have not the tube of the present species, but believe it will prove to belong to the same group.

Species 29. (Mus. Brit.)

GASTROCHÆNA MACROCHISMA. *Gas. testâ brevissimâ, inflatâ, rotundato-cuneiformi, tenuiter striatâ; latere antico ante umbones producto, subacuminato; latere postico latissimo, ad terminum subrotundo, margine dorsali declivi; hiatu latissimo, breviùsculo.*

THE WIDE-GAPING GASTROCHÆNA. Shell very short, inflated, roundly cuneiform, finely striated; anterior side produced in front of the umbones, rather acuminated; posterior side very broad, rather rounded at the end, dorsal margin sloped; hiatus very wide, rather short.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab. Philippine Islands.

GASTROCHÆNA.

	Plate.	Species.
apertissima, *Deshayes*	I.	4
brevis, *Sowerby*.....	I.	3
cucullata, *Deshayes*	II.	9
cuneiformis, *Spengler*	III. IV.	20
denticulata, *Deshayes*	II.	8
difficilis, *Deshayes*	I.	5
dubia, *Pennant*	I.	1
gigantea, *Deshayes*	III.	15
hyalina, *Sowerby*	IV.	21
humilis, *Deshayes*	IV.	25
impressa, *Deshayes*	IV.	23
interrupta, *Deshayes*.....	IV.	28
intersecta, *Deshayes*.....	IV.	26
lævigata, *Deshayes*	IV.	24
lagenula, *Lamarck*	III.	18
lamellosa, *Deshayes*	III.	14
macrochisma, *Deshayes*	IV.	29
modiolina, Lamarck	I.	1
mytiloides, *Lamarck*	III.	12
ovata, *Sowerby*	III.	16
Philippinensis, *Deshayes*	II.	7
plicatilis, *Deshayes*	I.	2
pupina, *Deshayes*	III.	17
Retzii, *Deshayes*	II.	6
rostrata, *Deshayes*	II.	10
rugulosa, *Sowerby*	III.	13
Rupellii, *Deshayes*	II.	11
spathulata, *Deshayes*	IV.	22
tenera, *Deshayes*	IV.	27
truncata, *Sowerby*	III.	19

MONOGRAPH

OF THE GENUS

XYLOPHAGA, NAVEA.

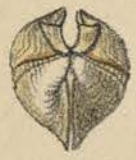
"One Name above all glorious names
With its ten thousand tongues
The everlasting sea proclaims,
Echoing angelic songs."—*Keble.*

1a

1c

1b

1d



2a

2b

Navea

3

G.B.Sowerby del et Lith

Vincent Brooks Day & Son Imp

XYLOPHAGA.

Genus XYLOPHAGA. *Turton.*

MOLLUSCUM TEREBRANS, *vermiforme, siphonibus ad terminum divisis. Testâ bivalvis globosâ, anticè latissimè angulatim apertâ, posticè ferè clausâ, medio sulco lato divisâ, cardine edentulo, calloso. Tubâ nullâ.*

BORING WORM-SHAPED MOLLUSC, with siphons divided at the end. Shell bivalve, globose, anteriorly very widely angularly open, posteriorly nearly closed, divided in the middle with a wide groove; hinge with no teeth, callous. No tube.

Xylophagæ are found in floating wood, generally boring *across* the grain and not with it, as in the case of Teredo. Only two species are known; one British and Boreal, the other collected by Mr. Cuming at Valparaiso.

Species 1. (Mus. Sowerby.)

XYLOPHAGA DORSALIS. *Xyl. testâ globosâ, epidermide tenui aurantio-viridi indutâ, medio sulco plano costis duabus marginato divisâ; latere antico brevi, validissimè angulato; latere postico breviùsculo, margine dorsali elevato; laminis accessoribus trigonis, latitudine longitudinem superante.*

THE DORSAL XYLOPHAGA. Shell globose, covered with an orange-green epidermis, divided in the middle by a flat groove bordered by two ribs; anterior side short, very strongly angular; posterior side rather short, with dorsal margin raised, accessory plates trigonal, broader than long.

TURTON. British Bivalves, II. Fig. 45.

Species 2. (Fig. *a*, *b*, Mus. Brit.)

XYLOPHAGA GLOBOSA. *Xyl. testâ latiùsculâ, latere antico moderatè angulato; latere postico producto, margine dorsali declivi; laminis accessoribus ungulatis, longitudine latitudinem superantibus.*

THE GLOBOSE XYLOPHAGA. Shell rather broad, anterior side moderately angular; posterior side produced, dorsal margin sloped; accessory plates claw-shaped, longer than broad.

SOWERBY. Proc. Zool. Soc. 1834; Thes. Conch. No. 10, p. 503.

Hab. Valparaiso.

The shell is wider and the posterior dorsal margin more sloped than in *X. dorsalis*. The proportions of the accessory plates are reversed.

NAVEA.

Genus NAVEA. *Gray.*

Testa ovata, anticè latè arcuatim hians, posticè clausa, margine superiori hiatûs anticè laminâ reflexâ marginato.

Shell ovate, anteriorly broadly gaping in an arch, posteriorly closed, upper margin of the anterior hiatus bordered by a reflected lamina.

I have not seen any species of this genus but the following one, which seems to perforate the sponges in which it is found embedded.

Species. (Fig. 3, Mus. Brit.)

NAVEA SUBGLOBOSA. *Nav. testâ medio sulco divisâ; latere postico brevi, rotundo; latere antico, hiatu maximo, supernè ad marginem utrinque cuneato et reflexo.*

THE SUBGLOBOSE NAVEA. Shell divided by a groove in the middle; posterior side short, rounded; anterior side with a very large hiatus, reflected and cuneate at the margin above.

GRAY. MS. in Brit. Mus.

Hab. —— ?

MONOGRAPH

OF THE GENUS

FISTULANA.

"Man is permitted much
To scan and learn
In Nature's frame."—*J. H. Newman.*

2b

2a

2c

1a

1b

3b

3a

3c

G.B. Sowerby del. et lith.

Vincent Brooks Day & Son Imp

FISTULANA.

Genus FISTULANA. *Lamarck.*

MOLLUSCUM VERMIFORME, ARĔNICOLUM, TŪBIGERUM. *Valvulæ liberæ, elongatæ, latè et angulariter hiantes; cardine lineari, edentulo. Tuba recta, circularis, anticè attenuata, versus terminum posticum crescens, termino per discum convexum perforatum clauso.*

Syn. *Gastrochæna.* Spengler (Adams).

MOLLUSK VERMIFORM, inhabiting sand, tube-forming. Valves free, elongated, broadly and angularly gaping; hinge linear, toothless. Tube straight, circular, anteriorly attenuated, increasing towards the posterior end; end closed by a convex perforated disc.

Adopting the nomenclature by which this genus is generally known, we should say that the *Fistulanæ* resemble the *Gastrochænæ* in the most essential characters. Both have free gaping valves enclosed in a tube closed at the anterior end. The main difference is that the former bury their tubes in the sand, only the small siphonal end being visible, but are unattached, while the latter are boring mollusca, and attach their tubes to the various substances in which they make their crypts.

The two or three species hitherto known are found at low water in Singapore, Philippines, and other islands of the Eastern seas.

Species 1. (Fig. *a*, *b*, Mus. Brit.)

FISTULANA CLAVA. *Fis. testâ oblongâ, rectiùsculâ, latè angulatim hianti, ad terminum posticum latè truncatâ, margine dorsali recto; umbonibus ferè terminalibus; latere antico brevi, subquadrato, acutè angulato, margine denticulato. Tubâ elongatâ, lævigatâ, concentricè tenuiter striatâ.*

THE CLUB FISTULANA. Shell oblong, rather straight, broadly angularly gaping, broadly truncated at the posterior end, dorsal margin straight; umboes nearly terminal; anterior side short, rather square, sharply angular, margin denticulated. Tube elongated, smooth, concentrically finely striated.

LAMARCK. Anim. sans Vert.

Gastrochæna mumia. Spengler.

Hab. Singapore.

Species 2. (Fig. *a*, *b*, *c*, Mus. Brit.)

FISTULANA AGGLUTINANS. *Fis. testâ angustissimâ, tortuâ; hiatu angulatissimo. Tubâ lapillos arenæque grana agglutinante.*

THE AGGLUTINATING FISTULANA. Shell very narrow, tortuous; hiatus very angular. Tube agglutinating small stones and grains of sand.

DESHAYES. Proc. Zool. Soc.

Hab. Philippines, &c.

Species 3. (Fig. *a*, *b*, *c*, Mus. Brit.)

FISTULANA GRANDIS. *Fis. testâ valvulis magnis, latis, posticè rotundè inflatis; hiatu vix angulato, latere antico brevissimo, arcuato. Tubâ concentricè rugis annulatâ.*

THE LARGE FISTULANA. Shell with large broad valves, roundly inflated posteriorly; hiatus scarcely angular, anterior side very short, arched. Tube concentrically annulated with wrinkles.

DESHAYES. Proc. Zool. Soc.

Hab. Philippines, &c.

MONOGRAPH

OF THE GENUS

RISSOA.

Lord! ope our hearts that we may feel,
Unbind our eyes that we may see,
The wondrous love Thy works reveal.—*Charles Mackay.*

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

G.B. Sowerby del et lith

Vincent Brooks Day & Son Imp

RISSOA.

PLATE I.

Genus RISSOA. *Freminville.*

Testa marina, spiralis, plerùmque turrita, lævis vel costata; spirâ acuminatâ, aperturâ semirotundâ vel pyriformi, subcanaliculatâ vel integrâ; labio externo plerùmque incrassato. Operculum corneum, subspirale.

Shell marine, spiral, generally turreted, smooth or ribbed; spire acuminated; aperture half-round or pyriform, slightly channelled or entire; outer lip for the most part thickened. Operculum horny, subspiral.

The above description and the following monograph are intended to include the genera RISSOA, *Alvania*, *Rissoina*, *Hydrobia*, and other genera, which have been separated but not very well defined, and which at least require more careful revision than has yet been accorded to them, and which it is not within the scope of this work to give. The *Rissoæ* or 'Rissoidæ' are found in all parts of the world, generally in shallow water among seaweeds.

Species 1. (Mus. Sowerby.)

RISSOA (-oina) SCALAROIDES. *Ris. testâ albâ, altissimâ, anfractibus senis, productis, medio angulatis, ad angulum plicatis; aperturâ ferè rotundâ, margine crasso, rotundo, labio interno distincto, angusto.*

THE SCALARIA-SHAPED RISSOA. Shell white, very high; whorls six, produced, angular in the middle, plaited at the angle, aperture almost round; margin thick, round; inner lip distinct, narrow.

C. B. ADAMS. Shells of Jamaica.

Hab. Philippines.

Species 2. (Mus. Marratt.)

RISSOA EUROPÆA. *Riss. testâ subpyramidatâ, costis numerosis longitudinalibus et striis spiralibus sculptâ, fulvâ, latè fusco-fasciatâ; spirâ pyramidatâ, anfractibus convexiùsculis; aperturâ breviùsculâ, margine externo albo, crenulato.*

THE EUROPEAN RISSOA. Shell rather pyramidal, sculptured with numerous longitudinal ribs and spiral striæ, fulvous, with broad brown bands; spire pyramidal, whorls rather convex, aperture rather short, outer lip white, crenulated.

RISSO. Eur. Mer. Pl. IX. f. 156.

Turbo cimex. Linnæus.

Rissoa Freminvillea, Risso.

Rissoa granulata, Philippi.

Rissoa mammillata, Risso.

Hab. Britain. Mediterranean.

Species 3. (Mus. Marratt.)

RISSOA MONTAGUI. *Riss. testâ fuscâ, breviùsculâ, costis paucis rudè crenulatis sculptâ; spirâ productâ, pyramidatâ; anfractibus senis, convexiùsculis; aperturâ subrotundâ, margine crenulato.*

MONTAGU'S RISSOA. Shell brown, rather short, sculptured with few, coarsely crenulated ribs; spire produced, pyramidal; whorls six, rather convex; aperture rather rounded, margin crenulated.

PAYRAUDEAU. Cat. Moll. Corse. Pl. V. f. 13–14.

Hab. Mediterranean.

The sculpture resembles that of Rissoa Europæa, but the ribs are fewer, and more distantly crenulated.

Species 4. (Mus. Brit.)

RISSOA CUMINGII. *Riss. testâ turritâ, albâ, pyramidatâ, acutè cancellatâ; anfractibus septenis, altis, rotundis; ultimo inflato; aperturâ subtrigonâ, infrà subcanaliculatâ, margine crasso, crenato.*

CUMING'S RISSOA. Shell turreted, white, pyramidal, sharply cancellated; whorls seven, high, rounded, last swelled; aperture rather trigonal, with a slight canal below, margin thick, crenated.

REEVE. Proc. Zool. Soc.

Hab. Philippines.

Species 5. (Mus. Brit.)

RISSOA BRUGUIERI. *Riss.* (-oina) *testâ pyramidatâ, altâ, albâ, solidâ, costis subcurvis et sulcis distantibus sculptis, spirâ productâ, pyramidatâ, an-*

fractibus senis, convexiùsculis; aperturâ pyriformi, infrà conaliculato, labio externo reflexo, lato, margine interno producto, tenui.

Bruguière's Rissoa. Shell pyramidal, high, white, solid, sculptured with slightly curved ribs and distant grooves; spire produced, pyramidal, whorls six, rather convex; aperture pyriform, channelled below; outer lip reflected, broad, inner margin produced, thin.

Payraudeau. Cat. Moll. Corse. Pl. V. f. 17–18.

Hab. Mediterranean.

Species 6. (Mus. Sowerby.)

Rissoa scalariana. *Riss.* (-oina) *testâ pyriformi, albidâ, parvâ, longitudinaliter costatâ, spiraliter tenuissimè striatâ, spirâ altâ, acuminatâ; anfractibus convexis, ultimo ventricoso; aperturâ semirotundâ.*

The Scalaria Rissoa. Shell pyriform, whitish, small, longitudinally ribbed; spirally very finely striated; spire raised, acuminated; whorls convex, last ventricose; aperture half-round.

Adams.——?

Hab. St. Vincent.

Species 7. (Mus. Sowerby.)

Rissoa D'Orbignyana. *Riss.* (-oina) *testâ turritâ, tenui, fulvo-albidâ; spirâ elongatâ, anfractibus novenis, irregulariter varicosis, inæqualiter convexiùsculis; aperturâ subtrigonâ, suprà infràque canaliculatâ; labio externo anticè angulatim producto.*

D'Orbigny's Rissoa. Shell turreted, thin, whitish fawn; spire elongated, whorls nine, irregularly varicose, unequally rather convex; aperture rather trigonal, channelled above and below; outer lip angularly produced in front.

A. Adams. Proc. Zool. Soc. 1865. p. 64.

Hab. Australia.

Species 8. (Mus. Marratt.)

Rissoa Bryerea. *Riss.* (-oina) *testâ albâ, obliquè costatâ; spirâ turritâ, elevatâ; anfractibus septenis, convexiùsculâ; aperturâ brevi, pyriformi, suprà infràque canaliculatâ.*

Bryer's Rissoa. Shell white, obliquely ribbed; spire turreted, raised; whorls seven, rather convex; aperture short, pyriform, channelled above and below.

Montagu. Test. Brit. Pl. XV. f. 8.

Hab. West Indies.

Species 9. (Mus. Sowerby.)

Rissoa concinna. *Riss.* (-oina) *testâ albidâ, turritâ, altiùsculâ; anfractibus senis, convexiùsculis, tenuiter costatis, tenuissimè spiraliter striatis; aperturâ majusculâ, infrà profundè canaliculatâ.*

The neat Rissoa. Shell whitish, turreted, rather high; whorls six, rather convex; finely ribbed, very finely spirally striated; aperture rather large, deeply channelled below.

A. Adams.

Hab. Japan.

Species 10. (Mus. Marratt.)

Rissoa calathisca. *Riss.* (Alvania) *testâ brevi, subpyramidatâ, fuscâ, longitudinaliter costatâ; spiraliter sulcatâ; costis rotundis, crenulatis; anfractibus ad suturam angulatis, aperturâ subovatâ, margine crasso, crenulato, albo.*

The little basket Rissoa. Shell short, rather pyramidal, brown, longitudinally ribbed; spirally grooved; ribs round, crenulated; whorls angular at the suture; aperture rather oval, margin thick, crenulated, white.

Montagu. Test. Brit.

Hab. Britain.

Another variety is figured on Plate X.

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G.B. Sowerby del. et lith

Vincent Brooks Day & Son Imp.

RISSOA.

PLATE II.

Species 11. (Mus. Sowerby.)

RISSOA AURISCALPIUM. *Ris. (Acme) testâ albâ, ad aperturam apicemque purpurascenti, semipellucidâ, altissimâ, medio paulò inflato; apice acuminato; anfractibus septem ad novem, superioribus frequenter longitudinaliter costatis, ultimo elongato; aperturâ magnâ, ovatâ, labio expanso.*

THE EAR-PICK RISSOA. Shell white, purplish at the aperture and apex, semipellucid, very elevated, a little inflated in the middle, apex acuminated; whorls seven, often longitudinally ribbed, last elongated; aperture large, oval, lip expanded.

LINNÆUS, *Systema Naturæ*.

Rissoa acicula, Risso.

Rissoa marginatus, Montagu.

R. acuta, Desmarest.

Hab. Mediterranean.

These long-spired *Rissoæ* do not seem to differ generically from the more typical forms.

Species 12. (Mus. Sowerby.)

RISSOA LABIOSA. *Ris. testâ ovato-acuminatâ, tenui, semipellucidâ, albo-purpurascenti, leviter costatâ; apice acuminato; anfractu ultimo subinflato, costis infra medium discontinuis; aperturâ magnâ, elongatâ, auriformi, labio expanso.*

THE MEMBRANOUS RISSOA. Shell ovate, acuminated, thin, semipellucid, purplish white, slightly ribbed; apex acuminated; last whorl rather inflated, ribs discontinued below the middle; aperture large, long, ear-shaped, outer lip expanded.

MONTAGU. Test. Brit. Vol. II. p. 400.

Hab. Great Britain, Mediterranean.

Species 13. (Mus. Sowerby.)

RISSOA VENUSTA. *Ris. testâ subpyramidatâ, subviridi, tenui, apice acuminato, anfractibus tenuiter costatis, ultimo subventricoso, infra medium lœvigatis; aperturâ auriformi, labio expanso, intùs margine acuto, extùs varicoso.*

THE BROAD-LIPPED RISSOA. Shell rather pyramidal, greenish, thin; apex acuminated; whorls finely ribbed, last rather ventricose, smooth below the middle; aperture ear-shaped, lip expanded, inside having a sharp edge, outside varicose.

PHILIPPI. Enum. Moll. Sic. Vol. I. p. 124, Pl. XXIII. f. 4.

Hab. Mediterranean.

This does not appear to belong to any of the numerous varieties of *Rissoa labiata*. A certain closeness of the outer lip and the distinct cessation of the regular ribs at the middle of the last whorl serve to distinguish it.

Species 14. (Mus. Sowerby.)

RISSOINA CÆLATA. *Ris. (Rissoina) testâ pyramidatâ, solidâ, albâ, costis nodosis spiraliter cinctâ, longitudinaliter inter costas striatâ; anfractibus octo, ad latera declivibus, superioribus longitudinaliter costatis, costis angulatis et nodosis; aperturâ subtrigonâ, labio externo crasso, crenulato.*

THE EMBOSSED RISSOINA. Shell pyramidal, solid, white, spirally girt with nodose ribs, longitudinally striated between the ribs; whorls eight, sloped at the sides, upper longitudinally ribbed, ribs angular and nodose; aperture subtrigonal, outer lip thick, crenulated.

A. ADAMS. Proc. Zool. Soc. 1851, 267.

Rissoina striata, Quoy.

Hab. Siguijor.

Species 15. (Mus. Marrat.)

RISSOA CINGILLUS. *Ris. testâ pyramidatâ, lœvigatâ, vel leviter spiraliter striatâ, fulvâ, castaneo-trifasciatâ; anfractibus quinque, subrotundis; aperturâ parvâ, columellâ validâ, labio externo obtusè marginato.*

The girdle Rissoa. Shell pyramidal, smooth, or slightly spirally striated, fulvous, three-banded with chestnut; whorls five, a little rounded; aperture small, columella strong, outer lip blunt-edged.

Montagu. Testacea Britannica, Vol. II. p. 35–7.

Rissoa vittata, Donovan.

Rissoa rupestris, Forbes.

Hab. British coasts.

Species 16. (Mus. Sowerby.)

Rissoa striatula. *Ris. testâ albâ, brevi, spiraliter, prominenter, distanterque costatâ, inter costas longitudinaliter striatâ; anfractibus quatuor, ultimo magno, ad medium tenuiter costato, supernè prope suturam angulatim planulato; aperturâ brevi, labio crenulato.*

The little striated Rissoa. Shell white, short, spirally, prominently, and distantly ribbed, longitudinally striated between the ribs; whorls four, last large, finely ribbed at the middle, angularly flattened above near the suture; aperture short, lip crenulated.

Montagu. Testacea Britannica, Vol. II. p. 306, Pl. X. f. 5.

Turbo carinatus, Da Costa.

Turbo monilis, Fleming.

Hab. British coasts.

Beautifully sculptured with thread-like striæ crossing prominent keel-like spiral ribs.

Species 17. (Mus. Sowerby.)

Rissoa spirata. *Ris. (Rissoina) testâ albâ, turritâ, spiraliter tenuiter striatâ; anfractibus novem, sex superioribus brevibus abruptè versus apicem acuminatum acclivibus, longitudinaliter costatis, tribus inferioribus elevatis, lævissculis subcylindraceis; suturâ profundè incisâ; aperturâ subpyriformi, labio externo expanso crassiusculo.*

The spired Rissoa. Shell white, turreted, spirally finely striated; whorls nine, six upper short, abruptly sloped towards an acuminated apex, longitudinally ribbed, three lower raised, rather smooth, subcylindrical; suture deeply incised; aperture rather pyriform, outer lip expanded, rather thick.

Sowerby. Genera of Recent and Fossil Shells.

Hab. Philippines.

Species 18. (Mus. Sowerby.)

Rissoa proxima. *Ris. testâ albâ, minutâ, tenui, ovato-oblongâ, spiraliter densè striatâ; anfractibus quinque, inflatis, gradatim crescentibus; aperturâ ovatâ, margine acuto, simplici.*

The approximate Rissoa. Shell white, minute, thin, ovate-oblong, spirally closely striated; whorls five, inflated, gradually increased; aperture ovate, margin simple.

Alder MS. Thomson, Ann. Nat. Hist. Vol. XX. p. 174.

Rissoa virginea, Brown.

Hab. Ireland, very rare.

Differing from *Rissoa vitrea* in being striated spirally and in the proportionate equality of increase in the whorls.

Species 19. (Mus. —— ? Copied.)

Rissoa vitrea. *Ris. testâ parvâ, albâ, tenui, semipellucidâ, ovato-oblongâ, lævigatâ; anfractibus quinque, inflatis, penultimo magno elevato; aperturâ ovatâ, margine acuto, simplici.*

The glassy Rissoa. Shell small, white, thin, semi-pellucid, ovate-oblong, smooth; whorls five, inflated, the last large, elevated; aperture ovate, margin sharp, simple.

Montagu. Testacea Britannica, Vol. II. p. 351.

Rissoa glabrata, Megherle.

Rissoa crystallina, Brown.

Hab. Exmouth, Oban, &c.

The penultimate whorl is very large in proportion to the others.

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RISSOA.

PLATE III.

Species 20. (Mus. Sowerby.)

RISSOA COSTATA. *Ris. testâ subpyramidatâ, subventricosâ, fulvâ; anfractibus sex, prope suturam angulatis, obliquè costatis, spiraliter striatis; ultimo infrà subcarinato; aperturâ subquadratâ, columellâ rectiùsculâ.*

THE RIBBED RISSOA. Shell rather pyramidal, rather ventricose, fulvous; whorls six, angular near the suture, obliquely ribbed; spirally striated, last slightly keeled beneath; aperture rather square, columella rather straight.

ADAMS. Trans. Lin. Soc. Vol. VIII. Pl. XIII. f. 13, 14.
Turbo costatus, Montagu.
Turbo plicatus, Muhlfeild.
Rissoa plicata, Michaud.
Hab. Britain.

Species 21. (Mus.—— ? Copied.)

RISSOA VENTRICOSA. *Ris. (Hydrobia) testâ subpyramidatâ, lævigatâ, pallidè fulvâ; anfractibus quinque, rotundis; ultimo ventricoso, leviter umbilicato; aperturâ magnâ, columellâ rectiùsculâ, labio externo tenui.*

THE VENTRICOSE RISSOA. Shell subpyramidal, smooth, pale fulvous; whorls five, rounded; last ventricose, slightly umbilicated; aperture large, columella rather straight, outer lip thin.

DESMOULINS. Bulletin de la Société Philosophique de Paris, p. 8. Pl. I. f. 2.
Hab. Mediterranean.

Species 22. (Mus. Sowerby.)

RISSOA LACTEA. *Ris. (Alvania) testâ albâ, ovatâ, costellis numerosis, rotundis, crenulatis, spiralibus, supernè costis longitudinalibus sculptâ; spirâ parvâ; ultimo anfractu et aperturâ magnis, subovatis.*

THE MILK-WHITE RISSOA. Shell white, oval, sculptured with numerous rounded, crenulated, spiral riblets, and above with longitudinal ribs; spire small; last whorl and aperture large, ovate.

MICHAUD. Espèces de Rissoa, p. 9, f. 11, 12.
Rissoa cancellata, Recluz.

Species 23. (Mus.——? Copied.)

RISSOA ABYSSICOLA. *Ris. (Alvania) testâ subovatâ, albâ, supernè costatâ, inter costas profundè striatâ, ad partem inferiorem ultimâ anfractûs spiraliter costatâ, spirâ subpyramidatâ, ultimo anfractu magno; aperturâ latâ, labio crasso, rotundo.*

THE DEEP-SEA RISSOA. Shell rather ovate, white, ribbed above, deeply striated between the ribs, spirally ribbed at the lower part of the last whorl, spire somewhat pyramidal, last whorl large; aperture broad, lip thick, round.

FORBES. Brit. Moll. p. 86, Pl. LXXVIII. f. 1.
Hab. North Scotland.

Species 24. (Mus. Sowerby.)

RISSOA CORILEA. *Ris. (Rissoina) testâ albâ, solidâ, pyramidatâ, costis nodosis spiralibus et longitudinalibus cancellatâ, inter costas foveolatâ; spirâ elongatâ, subtortuâ, apice obtuso, anfractibus quinque, penultimo tumido; aperturâ ovatâ, infrà canaliculatâ, labio crasso, crenulatâ.*

THE CORILEAN RISSOA. Shell white, solid, pyramidal, cancellated with nodose spiral and longitudinal ribs, pitted between the ribs; spire elongated, rather tortuous, apex blunt; whorls five, last but one tumid; aperture ovate, with a channel below, lip thick, crenulated.

D'ORBIGNY. Mollusques de l'Ile de Cuba.
Hab. Coast of Cuba.

Species 25. (Mus. Sowerby.)

RISSOA CIMICOIDES. *Ris. (Alvania) testâ albâ, subfusiformi; spiraliter prominenter costatâ (interstitiis profundis), supra medium longitudinaliter validissimè crenulatim costatâ; spirâ acuminatâ; anfractibus supra suturam canaliculatis, ultimo*

tumido; aperturâ subrotundâ, supernè prope suturam angulatâ.

THE BUG-SHAPED RISSOA. Shell white, subfusiform, spirally prominently ribbed, interstices deep; above the middle, longitudinally very strongly crenulately ribbed; spire acuminated; whorls channelled above the suture, last tumid in the middle, aperture rather rounded, angular near the suture above.

FORBES. Brit. Moll.

Hab. Britain.

Species 26.

RISSOA ZETLANDICA. *Ris. (Alvania) testâ ovato-subelongatâ, pallidè fulvâ, spirâ turritâ, anfractibus subquadratis, validè nodoso-costatis, cancellatis; ultimo infrà carinato; aperturâ brevi, subrotundâ, columellâ supernè tumidâ, labio externo crasso, crenulato.*

THE ZETLAND RISSOA. Shell ovate, rather elongated, pale fulvous, spire turreted, whorls rather square, cancellated with strong nodose ribs, the last keeled below; aperture short, rather rounded; columella tumid above, outer lip thick, crenulated.

MONTAGU. Testacea Britannica. Mont. Trans. Linn. Soc. Vol. XI. p. 194, Pl. XIII. f. 5.

Rissoa cyclostomata, Recluz.

Hab. Great Britain.

Species 27. (Fig. *a*, *b*, *c*, Mus. Sowerby.)

RISSOA ULVÆ. *Ris. (Hydrobia) testâ fulvâ, trochiformi, solidâ, lævi, spirâ acuminatâ, elevatâ, anfractibus planulatis, suturâ incisâ separatis, ultimo leviter angulato; aperturâ ovatâ, labio interno integro.*

THE SEA-WEED RISSOA. Shell fulvous, trochus-shaped, solid, smooth; spire acuminated, raised; whorls flattened, separated by an incised suture, last slightly angular; aperture ovate.

PENNANT. Brit. Zool. Ed. 4, Vol. IV. p. 132.

Rissoa subumbilicata, Berkeley.

Rissoa Barleei, Jeffreys.

Hab. British coasts.

Species 28. (Mus. Sowerby.)

RISSOA SEMISTRIATA. *Ris. (Cingula) parvâ, fulvâ, maculis in seriebus, tribus castaneis, subquadratis cinctâ; spiraliter striatâ; anfractibus quinque, planiùsculis; ultimo magno, superioribus lævibus; aperturâ subtrigonâ.*

THE HALF-STRIATED RISSOA. Shell small, fulvous, banded with rather square chestnut spots in three rows; spirally striated; whorls five, rather flat, last large; upper smooth; aperture nearly trigonal.

MONTAGU. Testacea Britannica, Supp. p. 136.

Rissoa pulchra, Johnson.

Rissoa tristriata, Thompson.

Rissoa subsulcata, Philippi.

Hab. Britain.

Species 29. (Mus. Marrat.)

RISSOA COSTULATA. *Ris. testâ fulvâ, subconicâ, costis magnis, distantibus, angulatis armatâ, spiraliter striatâ; spirâ acuminatâ, anfractibus sex, elevatis, angulatis; aperturâ subrotundâ, margine crasso.*

THE RIBBED RISSOA. Shell fulvous, rather conical, armed with large, distant, angular ribs; spirally striated, spire acuminated; whorls six, elevated, angular; aperture rather rounded, margin thick.

ALDER. As of Risso, Ann. Nat. Hist.

Rissoa similis, Scacchi Cat. p. 14, 2.

Rissoa Guerinii, Rev. Zool. Cuv. 1843, p. 7.

Hab. Britain, France.

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36 a

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36 b

G.B. Sowerby del. et lith

Vincent Brooks Day & Son Imp.

RISSOA.

PLATE IV.

Species 30. (Mus. Sowerby.)

RISSOA FORTIS.—*Ris.* (*Rissoina*) *testâ albidâ, crassâ, angustâ, elevatâ, medio tumidiùsculâ, costis rectis, crebris, lævibus, sculptâ; anfractibus septem, altis, planulatis; apice acuto; aperturâ parvâ, obliquâ, angustâ, infrà canaliculatâ; labio interno crasso, expanso.*

THE STRONG RISSOA. Shell whitish, thick, narrow, raised, rather tumid in the middle, sculptured, with straight, close, smooth ribs; whorls seven, high, flattened; apex sharp; aperture small, oblique, narrow, channelled below; outer lip thick, spread.

C. B. ADAMS.

Hab. Jamaica.

Species 31. (Mus. ——?)

RISSOA MACULATA. *Ris. testâ minutâ, subtrochiformi, lævigatâ, fulvâ; anfractibus sex, rotundis, ultimo maculis subarcuatis versus suturam, subquadratis infrà, et fasciâ spirali castaneis pictâ; aperturâ majùsculâ, labio interno reflexo.*

THE SPOTTED RISSOA. Shell minute, subtrochiform, smooth, brown; whorls six, rounded, the last painted near the suture with spots slightly curved, below rather square, and a spiral band of chestnut; aperture rather large, inner lip reflected.

SOWERBY. Index of British Shells, as of an unnamed authority.

Rissoa inconspicua, var. auctorum.

Hab. Britain.

The pattern of colouring is so distinct that it may justify specific designation.

Species 32. (Mus. Marrat.)

RISSOA CRENULATA. *Ris. testâ albâ, brevi, turritâ, quadratim cancellatâ; anfractibus supernè prope suturam angulatis, penultimo ventricoso, ultimo magno; aperturâ ovatâ, margine externo crenulato.*

THE CRENULATED RISSOA. Shell white, short, turreted, cancellated in squares; whorls angular above near the suture, penultimate ventricose, last large; aperture ovate, outer margin crenulated.

MICHAUD. Nouvelles Espèces de Rissoa, p. 15, f. 1, 2.

Turbo cancellatus, Da Costa.

Turbo cimex, Donovan, &c., non Linnæus.

Hab. Britain and Channel Islands.

Cancellations broad, but not so much so as those of Zetlandica.

Species 33. (Mus. Marrat.)

RISSOA RUFILABRIS. *Ris.* (*Alvania*) *testâ trochiformi, fulvâ, ad suturam rufolineatâ; anfractibus angulatis, supra angulum distanter, leviter costatis; apice acuminato; aperturâ subtrigonâ, margine rubro vel violaceo.*

THE RED-LIPPED RISSOA. Shell trochiform, fulvous, with a red line at the suture; whorls angular, distantly, slightly ribbed above the angle; apex acuminated; aperture rather trigonal, margin red or violet.

LEACH. (Alvania) Alder. Ann. Nat. Hist. Vol. XIII. p. 325.

Rissoa hyalina, Desmoulins.

Rissoa lilacina, Recluz.

Hab. Europe.

Species 34. (Mus. Hanley.)

RISSOA INCONSPICUA. *Ris.* (*Cingula*) *testâ conicâ, elevatâ, albidâ, longitudinaliter costatâ, inter costas tenuissimè striatâ; anfractibus sex, lateraliter subcompressis; apice obtuso; ultimo anfractu infrà lævigatâ; aperturâ magnâ; columellâ rectiùsculâ.*

THE INCONSPICUOUS RISSOA. Shell conical, raised, whitish, longitudinally ribbed, very finely striated between the ribs; whorls six, rather compressed at the sides; apex obtuse; last whorl smooth below; aperture large; columella rather straight.

ALDER. Ann. and Mag. of Nat. Hist. Vol. XIII. p. 323, Pl. VIII. f. 6, 7.

Hab. Britain.

Species 35. (Mus. Marrat.)

RISSOA PUNCTURA. *Ris. (Cingula) testâ ventricosâ, fulvâ, subconicâ, spiraliter puncturato-striatâ; anfractibus quinque, rotundis, suprà infràque maculis linearibus castaneis pictis; aperturâ subrotundâ.*

THE PUNCTURED RISSOA. Shell ventricose, fulvous, rather conical, spirally striated in punctures; whorls five, rounded, painted above and beneath with linear chestnut spots; aperture rather rounded.

MONTAGU. Testacea Britannica, Vol. II. p. 320, Pl. XII. f. 5.

*Rissoa punctura*ta, Macgillivray.

Rissoa approximata, Brown.

Hab. British coasts.

Species 36. (Fig. *a*, *b*, Mus. Marrat.)

RISSOA PARVA. *Ris. testâ conicâ, lævi, fulvâ, acuminatâ, altâ; anfractibus rotundis, brevibus, lineis maculisque castaneis, frequenter curvis plerumque pictis; aperturâ subquadratâ, columellâ rectiùsculâ.*

THE SMALL RISSOA. Shell conical, smooth, fulvous, acuminated, raised; whorls rounded, short, generally painted with chestnut lines and spots, frequently curved; aperture subquadrate, columella rather straight.

MATON and RACKET. Act. Linn. Soc. VIII. p. 171.

Rissoa sublutea, Adams.

Rissoa interrupta, Johnson.

Rissoa lactea, Donovan.

Hab. British coasts and Channel.

Species 37. (Mus. Hanley.)

RISSOA BEANII. *Ris. (Alvania) testâ subconicâ, fuscâ, supernè leviter costatâ, omnino spiraliter striatâ, striis ad costas crenulatis; spirâ acuminatâ; anfractibus sex, convexiùsculis, ultimo breviùsculo; aperturâ subovatâ, margine distincto, albo; labio externo albo.*

BEAN'S RISSOA. Shell rather conical, brown, slightly ribbed above, spirally striated all over, striæ crenulated at the ribs; spire acuminated; whorls six, rather convex, last rather short; aperture rather oval, margin distinct, white; outer lip white.

HANLEY. Forbes and Hanley, British Mollusca, III. Pl. LXXVIII. f. 1.

Hab. Great Britain and Ireland.

Species 38. (Mus. —— ? Copied.)

RISSOA SUPRACOSTATA. *Ris. testâ brevi, pallidâ, ventricosâ; anfractibus quinque, rotundis, superioribus acutè costatis, inter costas striatis; ultimo magno, lævigato; spirâ acutâ, subroseâ; aperturâ magnâ, subovatâ.*

THE UPPER-RIBBED RISSOA. Shell short, pale, ventricose; whorls five, rounded, upper sharply ribbed, striated between the ribs, last large, smooth; spire sharp, rather rose-coloured; aperture large, subovate.

——?

Hab. Britain.

This shell is evidently a somewhat abnormal form, but not of R. parva. Some author, however, having named it, it is here admitted, as it cannot be identified with any known species.

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G.B. Sowerby del et Lith.

Vincent Brooks Day & Son imp

RISSOA.

PLATE V.

Fig. 10 *b*.

RISSOA CALATHISCUS, var. (See Pl. I.)

Species 39. (Mus. Sowb.)

RISSOA CALATHUS. *Ris.* (*Alvania*) *testâ subconicâ, pallidâ, semipellucidâ, costis longitudinalibus, subdistantibus, subdepressis, et liris spiralibus magis approximatis, interstitiis profundè foveolatis, cancellatâ; anfractibus quinque convexiùsculis; aperturâ subovatâ; labio externo crasso, intus crenato.*

THE BASKET RISSOA. Shell rather conical, pale, semi-pellucid, cancellated with rather distant, rather depressed longitudinal ribs and rather nearer spiral ridges, with deeply-pitted interstices; whorls five, rather convex; aperture rather ovate, outer lip thick, crenated within.

FORBES and HANLEY. British Mollusca, Vol. III. p. 80.

Hab. British coasts and Europe generally.

Species 40. (Mus. Sowerby.)

RISSOA STRIATA. *Ris.* (*Anoba*) *testâ albidâ, elongatâ, tenuiter spiraliter striatâ; anfractibus sex, convexis, elevatis, supernè ad suturam crenulatis, ultimo brevi; aperturâ parvâ, labio externo extùs varicoso, margine incrassato, subcrenulato.*

THE STRIATED RISSOA. Shell whitish, elongated, finely striated spirally; whorls six, convex, raised, crenulated above at the suture, last short; aperture small, outer lip varicose without, margin thickened and slightly crenulated.

MONTAGU. (Turbo) Test. Brit. Vol. II. p. 326, Pl. XIII. f. 25, 26.

Rissoa minutissima, Michaud.

Rissoa communis, Forbes.

Rissoa gracilis, Macgillivray.

Hab. Britain.

Species 41. (Mus. Marrat.)

RISSOA VENTROSA. *Ris. testâ subviridi, fulvescenti, pyramidatâ, spirâ elevatâ; anfractibus quinque, lateraliter compressis, ultimo rotundo, ferè umbilicato, aperturâ subovatâ, margine acuto.*

THE INFLATED RISSOA. Shell rather greenish-buff, pyramidal, spire elevated; whorls five, laterally compressed, last round, nearly umbilicated; aperture rather oval, margin acute.

MONTAGU. (Turbo) Test. Brit. II. p. 317, Pl. XII. f. 13.

Rissoa acuta, Draparnaud.

Turbo ventricosus, Dillwyn.

Hab. Great Britain, France.

Species 42. (Mus. *late* Deshayes.)

RISSOA ROSEA. *Ris. testâ solidâ, roseâ, spirâ elevatâ, anfractibus septem, moderatè convexis, longitudinaliter costatis, costis regularibus, solidis, lævibus, rectiùsculis, interstitiis æquantibus; aperturâ auriformi, columellâ leviter uniplicatâ, labio externo crasso, rotundo.*

THE PINK RISSOA. Shell solid, pink, spire elevated; whorls seven, moderately convex, longitudinally ribbed, ribs regular, solid, smooth, rather straight, equalling the interstices; aperture auriform, columella slightly single-plaited, outer lip thick, rounded.

DESHAYES. Conch. Ile de la Réunion, p. 61, Pl. VII. f. 29.

Hab. Isle of Bourbon.

Species 43. (Mus. *late* Deshayes.)

RISSOA INSOLITA. *Ris.* (*Alvania ?*) *testâ minimâ, candidâ, elongato-turritâ, apice obtusiùsculâ; anfractibus septenis, costis duabus inæqualibus proeminentibus cinctis, majore prope suturam positâ, eleganter granoso-crenulatâ; ultimo anfractu breviùsculo, transversim quadricostato; aperturâ minimâ, ovatâ, angustâ.*

THE EXTRAORDINARY RISSOA. Shell very small, white, elongate-turreted, apex rather obtuse; whorls seven, girt with two unequal prominent ribs, the larger placed near the suture, elegantly granularly crenulated, last whorl rather short, transversely four-ribbed; aperture very small, oval, narrow.

DESHAYES. Conch. Île de la Réunion, p. 63, Pl. XIII. f. 15, 16.

Hab. Isl. Bourbon.

Species 44. (*f, a, b,* Mus. Crosse ?)

RISSOA GENTILISSIANA. *Ris.* (*Hydrobia*) *testâ parvâ, pallidè fulvâ, lævi, ovatâ, apice obtuso; anfractibus quatuor, convexiùsculis, ultimo elongato, inflato, subsoluto; aperturâ disjunctâ, obliquè ovatâ, operculo fusco.*

THE FAMILY-RELATION RISSOA. Shell small, pale fulvous, smooth, with obtuse apex; whorls four, rather convex, last elongated, inflated, a little uncoiled; aperture disjoined, obliquely ovate.

CROSSE. Journ. de Conch. Vol. XXII. p. 112, 1874.

Hab. New Caledonia.

Mr. Crosse remarks that this is the second of the same genus found in the locality.

Species 45. (Mus. Souverbie ?)

RISSOA FIMBRIATA. *Ris.* (*Rissoina*) *testâ albidâ, turritâ, altissimâ, lævi, apice obtuso; anfractibus octo, lateraliter compressis, distanter longitudinaliter costatis, propè suturam subangulatis; aperturâ obliquè ovatâ, columellâ duplicatâ, labio externo duplicato, fimbriato.*

THE FRINGED RISSOA. Shell whitish, turreted, very high, smooth, with blunt apex; whorls eight, laterally compressed, distantly longitudinally ribbed, with a slight angle near the suture; aperture obliquely ovate, columella doubled, outer lip doubled, fringed.

SOUVERBIE. Journ. de Conch. p. 52, 1872.

Hab. New Caledonia.

Species 46. (Mus. Souverbie ?)

RISSOA INCERTA. *Ris.* (*Rissoina*) *testâ fuscâ, solidâ, altâ, turritâ, spirâ elevatâ, apice obtuso; anfractibus octo, ad suturam angulatis, costatis, costis ad spiram continuis, distantibus, rotundis, ad medium ultimi anfractûs discontinuis; aperturâ obliquè ovatâ, columellâ arcuatâ.*

THE UNCERTAIN RISSOA. Shell brown, solid, elevated, turreted, spire raised, with obtuse apex; whorls eight, angular at the suture, ribbed, ribs continued at the spire, distant, rounded, discontinued at the middle of the last whorl; aperture obliquely ovate.

SOUVERBIE. Journ. de Conch. 1872, p. 33, Pl. I. f. 4.

Hab. Ins. Arl. New Caledonia.

Species 47. (Mus. Marrat.)

RISSOA PULCHERRIMA. *Ris.* (*setia*) *testâ minutâ, brevi, globosâ, lævi, subumbilicatâ, in seriebus tribus maculis rubro-fuscis quadratis ornatâ; anfractibus quatuor, rotundis, ultimo magno, ventricoso; aperturâ rotundâ, margine simplici.*

THE VERY PRETTY RISSOA. Shell minute, short, globose, smooth, slightly umbilicated, ornamented with red-brown square spots in three rows; whorls four, rounded, last large, ventricose; aperture round, margin simple.

JEFFREYS. Ann. Nat. Hist. Vol. II. p. 351.

Hab. Channel Islands.

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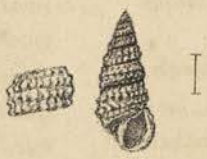

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G.B. Sowerby del. et Lith

Vincent Brooks Day & Son Imp

RISSOA.

PLATE VI.

Fig. 1 *b*, *Rissoa denticulata*. See Plate I.

Species 48. (Mus. Sowerby.)

RISSOA SOLUTA. *Ris.* (*Setia*) *testâ minimâ, ovatâ, albâ, spiraliter striatâ; anfractibus tribus, brevibus, rotundis, ultimo ventricoso, subsoluto, umbilicato; aperturâ rotundâ, labio externo rectiùsculo.*

THE LOOSE-COILED RISSOA. Shell very small, oval, white, spirally striated; whorls three, short, round, last ventricose, a little uncoiled, umbilicated; aperture round, outer lip rather straight.

PHILIPPI. Moll. Sic. Vol. II. p. 130, Pl. XXIII. f. 18.

Hab. Britain.

Species 49. (Mus. Jeffreys.)

RISSOA ALDERI. *Ris.* (*Setia*) *testâ minutâ, pallidè, fulvâ, lævi, subovatâ; anfractibus quinque, rotundis, elevatis, ultimo ventricoso, subumbilicato; aperturâ subovatâ, labio externo tenui, columellâ rectiùsculâ.*

ALDER'S RISSOA. Shell minute, pale, fulvous, smooth, rather oval; whorls five, rounded, elevated, last ventricose, slightly umbilicated; aperture rather oval, outer lip thin, columella rather straight.

JEFFREYS. Ann. and Mag. of Nat. Hist. August, 1858.

Hab. North Britain.

Species 50. (Mus. Sowerby.)

RISSOA FULGIDA. *Ris.* (*Setia*) *testâ minutâ, fulvâ, lævi, nitenti, castaneo spiraliter bifasciatâ, spirâ brevi, obtusâ; anfractibus tribus, rotundis; aperturâ rotundâ, margine tenui.*

THE BRIGHT RISSOA. Shell minute, fulvous, smooth, shining, with two chestnut spiral bands, spire short, obtuse; whorls three, rounded; aperture rounded, margin thin.

ADAMS. Trans. Linn. Soc. Vol. III. p. 254.

Hab. Britain and Ireland.

Species 51. (Mus. Brit.)

RISSOA ANATINA. *Ris.* (*Hydrobia*) *testâ minutâ, subviridi, tenui, ovato-subglobosâ, spirâ brevi, apice acuto; anfractibus quinque, rapidè crescentibus, distinctis, prope suturam angulatis, ultimo subgloboso, suturâ canaliculatâ; aperturâ subrotundâ, margine tenui.*

THE DUCK'S RISSOA. Shell small, rather green, thin, ovato-subglobose, spire short, apex acute; whorls five, rapidly increased, distinct, angular near the suture, last subglobose, suture channelled; aperture rather round, margin thin.

DRAPARNAUD. Moll. Terr. et Fluv. de France, p. 37, Pl. I. f. 24, 25.

Hab. France, England.

Species 52. (Mus. Jeffreys.)

RISSOA EXIMIA. *Ris. testâ albidâ, minutissimâ, subovatâ, longitudinaliter costâtis, costis distantibus, incisis, in medio anfractuum costis spiralibus tribus decussatis, interstitiis excavatis; anfractibus quatuor, infrà biangulatis, suturâ profundâ; aperturâ subrotundâ, margine acuto.*

THE NOTABLE RISSOA. Shell whitish, very small, somewhat ovate, longitudinally ribbed, ribs distant, incised, decussated by three spiral ribs in the middle of each whorl; interstices excavated; whorls four, biangular below, suture deep; aperture rather round, margin sharp.

JEFFREYS. Sowerby's Illustrated Index of Brit. Sp.

Chemnitzia Barleei, Clark.

Hab. Britain.

Species 53. (Mus. Sowerby.)

RISSOA NITIDA. *Ris.* (*Rissoina*) *testâ albâ, solidâ, elatâ, spirâ elongatâ, medio subinflato, apice acuminato; anfractibus octo, convexis, spiraliter et longitudinaliter costatis, costis ad angulos nodosis; aperturâ*

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G.B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp.

RISSOA.

PLATE VI.

Fig. 1 *b*, *Rissoa denticulata*. See Plate I.

Species 48. (Mus. Sowerby.)

RISSOA SOLUTA. *Ris.* (*Setia*) *testâ minimâ, ovatâ, albâ, spiraliter striatâ; anfractibus tribus, brevibus, rotundis, ultimo ventricoso, subsoluto, umbilicato; aperturâ rotundâ, labio externo rectiùsculo.*

THE LOOSE-COILED RISSOA. Shell very small, oval, white, spirally striated; whorls three, short, round, last ventricose, a little uncoiled, umbilicated; aperture round, outer lip rather straight.

PHILIPPI. Moll. Sic. Vol. II. p. 130, Pl. XXIII. f. 18.

Hab. Britain.

Species 49. (Mus. Jeffreys.)

RISSOA ALDERI. *Ris.* (*Setia*) *testâ minutâ, pallidè, fulvâ, lævi, subovatâ; anfractibus quinque, rotundis, elevatis, ultimo ventricoso, subumbilicato; aperturâ subovatâ, labio externo tenui, columellâ rectiùsculâ.*

ALDER'S RISSOA. Shell minute, pale, fulvous, smooth, rather oval; whorls five, rounded, elevated, last ventricose, slightly umbilicated; aperture rather oval, outer lip thin, columella rather straight.

JEFFREYS. Ann. and Mag. of Nat. Hist. August, 1858.

Hab. North Britain.

Species 50. (Mus. Sowerby.)

RISSOA FULGIDA. *Ris.* (*Setia*) *testâ minutâ, fulvâ, lævi, nitenti, castaneo spiraliter bifasciatâ, spirâ brevi, obtusâ; anfractibus tribus, rotundis; aperturâ rotundâ, margine tenui.*

THE BRIGHT RISSOA. Shell minute, fulvous, smooth, shining, with two chestnut spiral bands, spire short, obtuse; whorls three, rounded; aperture rounded, margin thin.

ADAMS. Trans. Linn. Soc. Vol. III. p. 254.

Hab. Britain and Ireland.

Species 51. (Mus. Brit.)

RISSOA ANATINA. *Ris.* (*Hydrobia*) *testâ minutâ, subviridi, tenui, ovato-subglobosâ, spirâ brevi, apice acuto; anfractibus quinque, rapidè crescentibus, distinctis, prope suturam angulatis, ultimo subgloboso, suturâ canaliculatâ; aperturâ subrotundâ, margine tenui.*

THE DUCK'S RISSOA. Shell small, rather green, thin, ovato-subglobose, spire short, apex acute; whorls five, rapidly increased, distinct, angular near the suture, last subglobose, suture channelled; aperture rather round, margin thin.

DRAPARNAUD. Moll. Terr. et Fluv. de France, p. 37, Pl. I. f. 24, 25.

Hab. France, England.

Species 52. (Mus. Jeffreys.)

RISSOA EXIMIA. *Ris. testâ albidâ, minutissimâ, subovatâ, longitudinaliter costâtis, costis distantibus, incisis, in medio anfractuum costis spiralibus tribus decussatis, interstitiis excavatis; anfractibus quatuor, infrà biangulatis, suturâ profundâ; aperturâ subrotundâ, margine acuto.*

THE NOTABLE RISSOA. Shell whitish, very small, somewhat ovate, longitudinally ribbed, ribs distant, incised, decussated by three spiral ribs in the middle of each whorl; interstices excavated; whorls four, biangular below, suture deep; aperture rather round, margin sharp.

JEFFREYS. Sowerby's Illustrated Index of Brit. Sp.

Chemnitzia Barleei, Clark.

Hab. Britain.

Species 53. (Mus. Sowerby.)

RISSOA NITIDA. *Ris.* (*Rissoina*) *testâ albâ, solidâ, elatâ, spirâ elongatâ, medio subinflato, apice acuminato; anfractibus octo, convexis, spiraliter et longitudinaliter costatis, costis ad angulos nodosis; aperturâ*

parvâ, anticè canaliculatâ, columellâ brevi, crassâ, labio externo crasso, anticè producto.

The neat Rissoa. Shell white, solid, raised, spire elongated, rather swelled in the middle, apex acuminated; whorls eight, convex, spirally and longitudinally ribbed, ribs nodose at the angles; aperture small, anteriorly channelled, columella short, thick, outer lip thick, anteriorly produced.

A. Adams. Proc. Zool. Soc. 1851, p. 266.

Hab. Philippines.

Species 54. (Mus. Sowerby.)

Rissoa rubra. *Ris. (Barleia) testâ conicâ, fuscâ, solidâ, politâ; anfractibus quatuor, convexiùsculis, ultimo infra medium subangulato; aperturâ subtrigonâ, magnâ, columellâ rectiùsculâ.*

The red Rissoa. Shell conical, brown, solid, polished; whorls four, rather convex, last rather angular below the middle; aperture subtrigonal, large, columella rather straight.

Adams. Trans. Linn. Soc. Vol. III. Pl. XIII. f. 15.

Rissoa unifasciata, Montagu.

Hab. Britain, Mediterranean.

Species 55. (Mus. Marrat.)

Rissoa fulva. *Ris. (Barleia ?) testâ conicâ, elevatâ, solidâ, fuscâ, laiè fasciatâ, politâ; anfractibus quinque, lateraliter compressis, ultimo angulato; aperturâ subtrigonâ.*

The fulvous Rissoa. Shell conical, raised, solid, brown, broadly banded, polished; whorls five, laterally compressed, last angular; aperture subtrigonal.

Michaud. Nouv. Esp. de Rissoa, p. 15, f. 17, 18.

Hab. Adriatic.

Species 56. (Mus. Marrat.)

Rissoa crebrisulcata. *Ris. (Rissoina) testâ elongato-ovatâ, scabrâ, costis longitudinalibus subobliquis, validis, nodosis, et liris tenuibus spiralibus cancellatâ; anfractibus octo, convexiùsculis; aperturâ infrà canaliculatâ; aperturâ parvâ, ovatâ columellâ crassâ, brevi, labio externo crasso, extùs crenato.*

The close-grooved Rissoa. Shell elongated-ovate, scabrous, cancellated with rather oblique, strong, nodulous, longitudinal ribs; whorls eight, rather convex; aperture channelled below, aperture small, ovate; columella thick, short, outer lip thick, crenulated outside.

Sowerby.

Hab. —— ?

This beautifully sculptured little shell when received was labelled '*R. canaliculata Ad.*,' but being afterwards found not to agree with the specimen in the British Museum, we have had to give another name to it.

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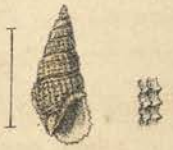

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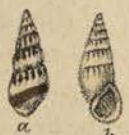

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G.B. Sowerby del et Lith.

Vincent Brooks Day & Son Imp

RISSOA.

PLATE VII.

Species 57. (Mus. Paris.)

RISSOA MOHRENSTERNI. *Ris.* (*Rissoina*) *testâ minimâ, albâ, ovato-pyramidatâ, apice acuto; anfractibus septem, convexiùsculis, longitudinaliter costellatis, striis spiralibus decussatis; ultimo anfractu magno, ventricoso, subovato; aperturâ semilunari, labio externo crasso, anticè producto.*

MOHRENSTERN'S RISSOA. Shell very small, white, ovately pyramidal, with acute apex; whorls seven, rather convex, longitudinally ribbed, decussated with spiral striæ; last whorl large, ventricose, subovate; aperture semilunar, outer lip thick, anteriorly produced.

DESHAYES. Conchyliologie de l'Ile de la Réunion, p. 62.

Hab. Ile Bourbon.

Species 58. (Mus. Brit.)

RISSOA SEMIGLABRATA. *Ris.* (*Rissoina*) *testâ pyriformi, solidâ, acuminatâ, anfractibus septem, convexiùsculis, superioribus curvicostatis, pœnultimo et antepenultimo costellis indistinctis spiralibus et striis minutissimis longitudinalibus decussatis, ultimo subgloboso, polito, aperturâ pyriformi, labio externo crasso, dentibus transversis tribus vel quatuor munito.*

THE HALF-POLISHED RISSOA. Shell pyriform, solid, acuminated, whorls seven, rather convex, the upper with curved ribs, two before the last decussated with indistinct spiral ribs and very minute longitudinal striæ, last rather globose, polished, aperture pyriform, outer lip thick, provided with three or four teeth.

A. ADAMS. Proc. Zool. Soc. 1851, p. 279.

Hab. Isl. Zebu, Philippines.

Species 59. (Mus. Brit.)

RISSOA CRASSILABRUM. *Ris.* (*Rissoa*) *testâ brevi, conicâ, lacteâ, politâ, solidâ, anfractibus sex, planulatis, apice acuminato; aperturâ pyriformi, angustâ, labio externo crasso, planulato, anticè tridentato, columellâ latâ.*

THE THICK-LIPPED RISSOA. Shell short, conical, milk-white, polished, solid, whorls six, flattened, apex acuminated; aperture pyriform, narrow, outer lip thick, flattened, anteriorly tridentate, columella broad.

PEASE. Proc. Zool. Soc.

Hab. California.

A curious little shell with three strong teeth across its broad, thick, outer lip.

Species 60. (Mus. Brit.)

RISSOA CANALICULATA. *Ris.* (*Rissoina*) *testâ solidâ, pyramidatâ, pallidissimè fulvâ, anfractibus septem, convexiùsculis, costatis; costis distantibus, lævibus, medio flexuosis, ad costam spiralem basalem terminantibus; ultimo anfractu infrà bicostato; aperturâ pyriformi, labio externo crasso.*

THE CHANNELLED RISSOA. Shell solid, pyramidal, very pale fulvous; whorls seven, rather convex, ribbed; ribs distant, smooth, flexuous in the middle, ending at the base, last whorl double ribbed beneath; aperture pyriform, outer lip thick.

SCHWARTZ. Monograph of Rissoinæ.

Hab. Philippines.

Species 61. (Mus. Brit.)

RISSOA INSIGNIS. *Ris.* (*Rissoina*) *testâ brevi, solidâ, supernè albâ, infrà subaureâ; anfractibus quinque superioribus latis, quadratis, prope suturam rectangulatis, costatis, subdecussatis, ultimo rotundo, subgloboso; aperturâ subovatâ, labio externo crasso, rotundo, denticulato, columellâ crassâ.*

THE WONDERFUL RISSOA. Shell short, solid, white above, rather golden below; whorls five, upper broad, square, rectangular near the suture, ribbed, slightly decussated, last round, subglobose; aperture subovate; outer lip thick, round, denticulated, columella thick.

ADAMS and REEVE. Voy. Samarang.

Hab. ——?

Species 62. (Mus. Brit.)

RISSOA DESHAYESIANA. *Ris. (Rissoina) testâ albâ, pyramidatâ, costis longitudinalibus nodosis et striis spiralibus tenuiter reticulatâ; anfractibus septem, convexiùsculis; aperturâ semiovatâ, columellâ brevi, crassâ, labio externo crasso, crenulato.*

DESHAYES'S RISSOA. Shell white, pyramidal, finely reticulated with longitudinal nodose ribs and spiral striæ; whorls seven, rather convex; aperture semiovate, columella short, thick, outer lip thick, crenulated.

RECLUS. Revue Zoologique.

Hab. —— ?

Species 63. (Mus. Brit.)

RISSOA DEFORMIS. *Ris. (Rissoina) testâ albâ, elongatâ, solidiùsculâ, altissimâ; anfractibus novem, irregulariter convolutis, inæqualiter convexis, superioribus sculptis, inferioribus lævigatis, aperturâ subtrigonâ, productâ; labio externo crasso.*

THE DEFORMED RISSOA. Shell white, long, rather solid, much elevated; whorls nine, irregularly wound, unequally curved, upper sculptured, lower smooth, aperture subtrigonal, produced; outer lip thick.

SOWERBY. Genera of Shells.

Hab. Philippines.

Species 64. (Fig. *a*, *b*, *c*, *d*, Mus. Brit.)

RISSOA VARIEGATA. *Ris. (Rissoina) testâ subcylindricâ, albâ, vel maculis vel fasciis variè pictâ; anfractibus rectiùsculis, supernè ad suturam crenulatis, ultimo majùsculo, apice acuminato, aperturâ semiovatâ, columellâ brevi, acuminatâ.*

THE VARIEGATED RISSOA. Shell rather cylindrical, white, or variously painted with spots or bands; whorls rather straight, crenulated above at the suture, last rather large; apex acuminated, aperture semiovate, columella short, acuminated.

ANGUS. Proc. Zool. Soc. 1867, p. 113.

Hab. Port Jackson.

Species 65. (Mus. Brit.)

RISSOA STRIOLATA. *Ris. (Rissoina) testâ elevatâ, tenui, tenuiter striatâ, albâ, apice acuminato; anfractibus novem, rectiùsculis, medianis latis, superioribus attenuatis; ultimo subangustato; aperturâ auriformi, columellâ infrà acuminatâ; labio externo subincrassato.*

THE FINE-STRIATED RISSOA. Shell raised, thin, finely striated, white, apex acuminated; whorls nine, rather straight, middle broad, upper attenuated, last rather narrow; aperture ear-shaped, columella acuminated below; outer lip rather thickened.

A. ADAMS. Proc. Zool. Soc. 1851, p. 206.

Hab. Baclayon, Isl. Bohol, Philippines.

In some degree resembling *Rissoina spirata*, but the whorls not angular.

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RISSOA.

PLATE VIII.

Species 66. (Mus. Brit.)

RISSOA PYRAMIDALIS. *Ris.* (*Rissoina*) *testâ subpupæformi, pallidè fulvâ, subventricosâ, obtusiùsculâ; anfractibus sex, breviùsculis, costis eleganter flexuosis, longitudinalibus lævibus liratâ; aperturâ subauriformi, labio externo crasso, columellâ subplicatâ.*

THE PYRAMIDAL RISSOA. Shell somewhat pupa-shaped, pale fulvous, rather ventricose, rather obtuse; whorls six, rather short, ridged with elegantly flexuous longitudinal ribs; aperture somewhat ear-shaped, outer lip thick, columella with a very slight plait.

A. ADAMS. Proc. Zool. Soc. 1851, p. 265.

Hab. Baclayon, Isl. Bohol, Philippines.

Species 67. (Mus. Brit.)

RISSOA MEMBRANACEA. *Ris. testâ tenui, corneâ, altissimâ; anfractibus septem, lateraliter subcompressis, apicalibus attenuatis, ultimo brevi; aperturâ auriformi, anticè expansâ, subretrorsâ, columellâ subflexuosâ, brevi, labio externo expanso.*

THE MEMBRANOUS RISSOA. Shell thin, horny, very elevated; whorls seven, laterally subcompressed, apical attenuated, last short; aperture ear-shaped, anteriorly expanded, rather inclined backwards, columella rather flexuous, short, outer lip expanded.

LÖVEN —— ?

Rissoa labiosa var. Auct.

Hab. Black Sea and Mediterranean.

The more elevated varieties of *Rissoa labiosa* do not seem to approach the slender form and light texture of this species.

Species 68. (Mus. Brit.)

RISSOA SMITHII. *Ris.* (*Rissoina*) *testâ albâ, parvâ, solidâ, pyramidatâ; anfractibus septem, convexis, costatis, costis longitudinalibus, leviter arcuatis, interstitiis spiraliter striatis, ultimo anfractu infrà spiraliter costatâ; aperturâ subtrigonâ, labio externo crasso, columellâ crassâ, obtusè uniplicatâ.*

SMITH'S RISSOA. Shell white, small, solid, pyramidal; whorls seven, convex, ribbed, longitudinal ribs, slightly curved, interstices spirally striated, last whorl spirally ribbed below; aperture somewhat trigonal, outer lip thick, columella thick, with a blunt plait.

ANGUS. Proc. Zool. Soc. 1867, p. 114.

Hab. Port Jackson, Australia.

Species 69. (Mus. Brit.)

RISSOA TURRICULA. *Ris.* (*Rissoina*) *testâ rubrofuscâ, parvâ, solidâ, pyramidatâ, acuminatâ; anfractibus octo, prominentibus, supra medium subangulatis, costatis, costis paucis medio subangulatis, interstitiis tenuissimè striatis; aperturâ semilunari, labio externo crasso, columellâ crassâ, brevi.*

THE LITTLE TURRET RISSOA. Shell red-brown, small, solid, pyramidal, acuminated; whorls eight, prominent, rather angular above the middle, with interstices very finely striated; aperture semilunar, outer lip thick, columella very thick, short.

ANGUS. Proc. Zool. Soc.

Hab. New South Wales.

The whorls are more prominent than those of *Rissoa Smithii*, and, with the ribs, more angular.

Species 70. (Mus. Brit.)

RISSOA CRASSA. *Ris.* (*Rissoina*) *testâ solidâ, rubrofulvâ, brevi, obtusâ; anfractibus septem, brevibus, lateraliter subcompressis, longitudinaliter costatis, costis leviter arcuatis, ultimo anfractu infrà lævigato; aperturâ rectiùsculâ, columellâ crassâ, brevi.*

THE THICK RISSOA. Shell solid, red fulvous, short, obtuse; whorls seven, short, laterally rather

compressed, longitudinally ribbed, ribs slightly arched, last whorl smooth below; aperture rather straight, columella thick, short.

ANGUS. MS. Brit. Mus.

Hab. Port Jackson.

Species 71. (Mus. Brit.)

RISSOA CINCTA. *Ris.* (*Rissoina*) *testâ parvâ, albâ, altâ, tenuiter interruptim castaneo fasciatâ; anfractibus septem, convexiùsculis, costatis, costis eleganter flexuosis, interstitiis striatis, ultimo anfractu brevi, rotundo, subreticulato.*

THE BELTED RISSOA. Shell small, white, high, finely interruptedly banded with chestnut; whorls seven, rather convex, ribbed, ribs elegantly flexuous, interstices striated, last whorl short, rounded, rather reticulated.

ANGUS. Proc. Zool. Soc. 1867, p. 114.

Hab. Port Jackson.

Species 72. (Mus. Brit.)

RISSOA NODICINCTA. *Ris.* (*Rissoina*) *testâ albâ, solidâ, pyramidatâ, acuminatâ; anfractibus octo, costellis spiralibus et longitudinalibus regulariter ad angulo nodosis ornatis; aperturâ semiovatâ, labio externo crasso, intùs crenulato.*

THE BEAD-BELTED RISSOA. Shell white, solid, pyramidal, acuminated; whorls eight, ornamented with spiral and longitudinal ribs, regularly nodose at the angles; aperture semi-ovate, outer lip thick, crenulated within.

A. ADAMS. Proc. Zool. Soc. 1851, p. 266.

Hab. Isl. Capul, Philippines.

Species 73. (Mus. Brit.)

RISSOA MONODONTA. *Ris.* (*Rissoina*) *testâ brevi, crassâ, lilacinâ et albâ, subpyriformi; anfractibus quinque, brevibus, ultimo subovato; aperturâ ovatâ, labio externo crasso, subplanulato, columellâ brevi, unidentatâ.*

THE SINGLE-TOOTHED RISSOA. Shell short, thick, lilac and white, rather pyriform; whorls five, short, last rather oval; aperture ovate, outer lip thick, rather flattened, columella short, with a single tooth.

BIVON. MS. Mus. Brit.

Hab. ——?

Species 74. (Mus. Sowerby.)

RISSOA VIOLACEA. *Ris. testâ parvâ, crassâ, breviter pyramidatâ, infrà aureo-fulvâ, medio violaceâ; anfractibus quinque, supernè albis, infrà castaneo latè fasciatis; aperturâ subtrigonâ; margine crasso.*

THE VIOLET RISSOA. Shell small, thick, shortly pyramidal, golden brown below, violet in the middle; whorls five, white above, broadly banded with chestnut below; aperture subtrigonal, margin thick.

DESMAREST. —— ?

Hab. Nice.

Species 75. (Mus. Sowerby.)

RISSOA RETICULATA. *Ris.* (*Rissoina*) *testâ albâ, pyramidato, tenui, acuminatâ; anfractibus novem, costis tenuissimis, eleganter flexuosis, longitudinalibus et striis spiralibus reticulatis; aperturâ subpyriformi, labio externo crasso, anticè producto, columellâ brevi, infrà acuminatâ.*

THE RETICULATED RISSOA. Shell white, pyramidal, thin, acuminated; whorls nine, reticulated with elegantly flexuous longitudinal ribs and spiral striæ; aperture subpyriform, outer lip thick, anteriorly produced, columella short, acuminated below.

SOWERBY. Genera of Sheils.

Hab. Isl. St. Thomas, West Indies.

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RISSOA.

PLATE IX.

Species 76. (Mus. Sowerby.)

RISSOA CLATHRATA. *Ris. (Rissoina) testâ albidâ, elatâ, solidâ, costis spiralibus supra suturam quinque et longitudinalibus paulò magis numerosis ad angulos nodosis clathratis; interstitiis profundè foveolatis; anfractibus altis, convexiùsculis, ultimo unisulcato et varicoso; aperturâ pyriformi, labio externo anticè producto; columellâ brevi, crassâ.*

THE LATTICED RISSOA. Shell whitish, elevated, solid, latticed with five spiral ribs above the suture, and rather more numerous longitudinal ones, nodose at the angles; interstices deeply pitted; whorls elevated, rather convex, the last with a groove and spiral varices behind the columella; aperture pyriform, outer lip anteriorly produced, columella short, thick.

A. ADAMS. Proc. Zool. Soc. 1851, p. 265.

Hab. Isl. Bohol, Philippines.

A beautiful broadly-sculptured species.

Species 77. (Fig. *a*, *b*, *c*, *d*, Mus. Brit.)

RISSOA VARIABILIS. *Ris. testâ subfusiformi, acuminatâ, tenuiter spiraliter fusco, punctato-lineatâ, et striatâ; anfractibus octo, elevatis, tribus apicalibus lævibus, alteris medio angulatis, costatis, costis medio prominentibus; aperturâ declivi, subovatâ, margine expanso, lilacinâ, extùs intùsque incrassato.*

THE VARIABLE RISSOA. Shell rather fusiform, acuminated, finely spirally brown spot-lined and striated; whorls eight, elevated, three apical smooth, the others angular in the middle; aperture sloped, rather oval, margin expanded, lilac, thickened within and without.

MUHLFELDT ——?

Hab. ——?

Species 78. (Mus. Sowerby.)

RISSOA DECUSSATA. *Ris. (Rissoina) testâ albâ, solidâ, altâ, tenuissimè costellis obliquis longitudinalibus et spiralibus minutis decussatâ, apice obtuso; anfractibus sex, infra medium convexiùsculis; aperturâ subpyriformi; columellâ brevi, attenuatâ, labio externo prominenti, crasso.*

THE DECUSSATED RISSOA. Shell white, solid, high, very finely decussated with oblique longitudinal riblets and spiral striæ, apex obtuse; whorls six, rather convex below the middle; aperture rather pyriform, columella short, attenuated, outer lip prominent, thick.

MONTAGU. Test. Brit. Vol. II. p. 399.

Hab. West Indies.

A West Indian shell described as British by Montagu. It has a smooth, and even a polished appearance until examined with the lens, when the oblique longitudinal ribs and fine spiral striæ are seen.

Species 79. (Mus. Sowerby.)

RISSOA SPLENDIDA. *Ris. testâ breviter subfusiformi, fulvâ, spiraliter lineis rubris punctatis pictâ; spirâ acuminatâ; anfractibus sex, brevibus, angulatim costatis, inter et infra costas fusco fasciatis; aperturâ brevi, labio externo intùs extùsque crasso violaceo-marginato.*

THE SPLENDID RISSOA. Shell shortly subfusiform, fulvous, spirally painted with red punctured lines, spire acuminated; whorls six, short, angularly ribbed, banded with brown between and under the ribs; aperture short, outer lip thickened within and without, edged with violet.

EICHIO —— ?

Hab. Black Sea.

Shorter and more finely ribbed than *Rissoa variabilis*.

Species 80. (Mus. Sowerby.)

RISSOA SAGRAIANA. *Ris. (Rissoina) testâ albâ, solidâ, altâ, pyramidatâ; anfractibus septem, costis crenatis, obliquis, transversè liratis, sculptis; aperturâ pyriformi, labio externo crassissimo, anticè producto.*

THE SAGRA RISSOA. Shell white, solid, high, pyramidal; whorls seven, sculptured with oblique crenated ribs ridged across; aperture pyriform, outer lip very thick, anteriorly produced.

D'ORBIGNY. Mollusques de Cuba.

Hab. Cuba.

Species 81. (Mus. Marrat.)

RISSOA LIGNEA. *Ris.* (*Alvania*) *testâ brevi, ventricosâ, solidâ, fuscâ, acuminatâ, rubro-lineatâ; anfractibus brevibus costatis, costis rotundis, crassis, crenatis; liris spiralibus tenuibus; aperturâ brevi, subrotundâ, columellâ crassâ, albâ; labio externo intùs incrassato; extùs varicoso.*

THE WOODY RISSOA. Shell short, ventricose, solid, brown, acuminated, red-lined; whorls short, ribbed; ribs rounded, thick, crenated; spiral ridges thin; aperture short, rather round, columella thick, white; outer lip thickened within, varicose without.

THORPE. Brit. Mar. Conch.

Hab. Nice.

Species 82. (Hab. Marrat.)

RISSOA CANARIENSIS. *Ris.* (*Alvania*) *testâ minutâ, pallidè fulvâ, brevi, crassâ, longitudinaliter crebricostatâ, spiraliter densè lineatâ; costis crassis, crenulatis; anfractibus paucis, brevibus, maculatis vel spiraliter lineatis, medio subangulatis, ultimo ventricoso; aperturâ parvâ, rotundâ, labio externo incrassato.*

THE CANARY ISLAND RISSOA. Shell minute, pale, fulvous, short, thick, numerously longitudinally ribbed, spirally closely ridged, ribs thick, crenulated; whorls few, short, spotted or spirally lineated, rather angular in the middle, last ventricose; aperture small, rounded, outer lip thickened.

D'ORBIGNY. Watson, Proc. Zool. Soc. 1873, p. 376.

Hab. Canary Islands, Madeira.

Finer in sculpture than the other species, with crenulated ribs.

Species 83. (Mus. Marrat.)

RISSOA DEPICTA. *Ris. testâ parvâ, ventricosâ, fulvâ, tenuiter spiraliter striatâ, semipellucidâ, obscurè seriatim maculatâ; anfractibus quinque, superioribus brevissimis, ultimo rotundo, subgloboso, aperturâ rotundâ, labio externo crasso.*

THE FADED RISSOA. Shell small, ventricose, fulvous, finely spirally striated, semipellucid, obscurely spotted in rows; whorls five, upper ones very short, last rounded, rather globose; aperture rounded, outer lip thick.

MANZONI. (Watson) Proc. Zool. Soc. 1873, p. 383.

Hab. Madeira.

It seems more globose and less conical than *Rissoa semistriata* of Montagu.

Species 84. (Mus. Montrouzier.)

RISSOA ARTENSIS. *Ris.* (*Rissoina*) *testâ elongatâ, subcylindricâ, subaurantiâ, tenui; anfractibus novem, apicalibus septem leviter plicatis, attenuatis, prope apicem subabruptè angustatis, penultimo subcylindrico, planato, alto; ultimo cylindrico elongato; aperturâ subtrigonâ, subcanaliculatâ; labio interno tenui, columellâ brevi, labio externo producto, incrassato.*

THE ISL. OF ART RISSOA. Shell elongated, subcylindrical, rather orange, thin; whorls nine, seven apical, slightly plaited, attenuated near the apex, rather abruptly narrowed, last but one rather cylindrical, flattened, high, last cylindrical, elongated; aperture subtrigonal, with a slight canal, inner lip thin, columella short, outer lip produced, thickened.

MONTROUZIER. Journ. Conchyl. Vol. XX. p. 364, 1872.

Hab. Ile Art, New Caledonia.

Species 85. (Mus. Souverbie.)

RISSOA SUBCONCINNA. *Ris.* (*Rissoina*) *testâ albâ, ovatâ, subpyramidatâ, altâ, longitudinaliter costatâ, costis tenuibus leviter arcuatis, distantibus, interstitiis lævibus; anfractibus octo, lentè crescentibus, inferioribus subventricosis; aperturâ subtrigonâ, labio interno tenui, expanso, columellâ uniplicatâ, brevi, labio externo producto, expanso, infra columellam emarginato.*

THE RATHER NEAT RISSOA. Shell white, ovately subpyramidal, high, longitudinally ribbed, ribs thin, slightly arched, distant, interstices smooth; whorls eight, slowly increased, lower rather ventricose; aperture subtrigonal, inner lip thin, expanded, columella single plaited, short, outer lip produced, expanded, emarginated under the columella.

SOUVERBIE. Journ. Conchyl. Vol. XX. p. 364, 1872.

Hab. Ile Art, New Caledonia.

This shell is named as above from its resemblance to *Rissoina concinna* of A. Adams, from which it differs materially in having no cross striæ.

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G.B. Sowerby del et Lith.

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RISSOA.

PLATE X.

Species 86. (Mus. Crosse.)

RISSOA (HEMISTOMIA) CALEDONICA. *Ris. testâ albidâ, lævigatâ, oblongo-ovatâ, tenui, apice obtuso; anfractibus quinque, ultimo oblongo, aperturâ obliquè semilunari, labio externo expanso; columellâ obliquâ, infrà acuminatâ.*

THE CALEDONIAN RISSOA. Shell whitish, smooth, oblong-ovate, thin, with obtuse apex; whorls five, the last oblong, aperture obliquely semilunar, outer lip expanded; columella oblique, acuminated below.

CROSSE. Journ. Conch. Vol. XII. p. 72, 1872.

Hab. Noumea, New Caledonia.

This shell bears so strongly the aspect of a true typical *Rissoa* that, in the absence of an operculum, it seems difficult to understand why a new genus should be created for it.

Species 87. (Mus. Brit.)

RISSOA (OINA) STRICTA. *Ris. testâ solidâ, pupæformi, pallidè fulvâ, altâ, rectâ; anfractibus octo; apicalibus attenuatis, acuminatis; medianis subinflatis, rectilateralibus supernè perpendiculariter costatis, ultimo infrà lævigato; aperturâ parvâ, semilunari, columellâ brevi, obliquâ, infrà truncatâ, labio externo expanso, acuto.*

THE STRAIGHTENED RISSOA. Shell solid, pupa-shaped, pale fulvous, raised, straight; whorls eight; apical attenuated, acuminated, middle somewhat inflated, straight-sided, perpendicularly ribbed on the upper side, the last smooth below; aperture small, semilunar, columella short, oblique, truncated below, outer lip expanded, sharp.

MENKE. Zeitschrift für Malak. 1850.

Hab. Cape St. Lucas.

Rissoa fortis is a more broadly-ribbed, darkly-coloured shell.

Species 88. (Mus. Brit.)

RISSOA (OINA) STRIATICOSTATA. *Ris. testâ, pyramidatâ, albâ, tenui, arcuatâ, tenuiter costatâ, spiraliter striatâ, anfractibus ultimo et penultimo subinflatis, superioribus parvis, attenuatis, apice acuminato, aperturâ subtrigonâ, labio externo producto, crassiùsculo; columellâ supernè incrassatâ, infrà subtruncatâ.*

THE RIB-STRIATED RISSOA. Shell pyramidal, white, thin, arched, finely ribbed, spirally striated, last and previous whorls a little inflated, upper small, attenuated, apex acuminated; aperture subtrigonal, outer lip produced, rather thick; columella thickened above, slightly truncate below.

D'ORBIGNY. Voy. Amér. Méridionale, p. 395.

Hab. St. Vincent's, West Indies.

Species 89. (Mus. Brit.)

RISSOA (OINA) CHESNELLII. *Ris. testâ albâ, subpyramidatâ, solidâ, costis solidis obliquè flexuosis et striis spiralibus, elevatis, cancellatâ; spirâ acuminatâ, anfractibus apicalibus attenuatis, ultimo anfractu inflato; aperturâ parvâ, suprà infràque subcanaliculatâ, labio externo crasso, crenulato.*

CHESNELL'S RISSOA. Shell white, rather pyramidal, solid, cancellated with obliquely flexuous solid ribs and spiral striæ; spire acuminated, apical whorls attenuated, last whorl inflated; aperture small, slightly channelled above and below; outer lip thick, crenulated.

MICHAUD. Cat. Ris. p. 17, f. 23–24.

Hab. India.

Species 90. (Mus. Brit.)

RISSOA (OINA) BUREANA. *Ris. testâ pallidâ, solidâ, obtusè pyramidatâ, lævigatâ, tenuissimè curvicostatâ; aperturâ parvâ, subtrigonâ, columellâ crassâ, brevi, subtortuâ, subtruncatâ, labio externo crasso.*

THE BUREAN RISSOA. Shell pale, solid, obtusely pyramidal, smooth, very slightly bent-ribbed; aperture small, subtrigonal, columella thick, short, rather tortuous, almost truncated, outer lip thick.

SOWERBY.

R. concinna. Adams.

Hab. Isl. Burea, Philippines.

Species 91. (Mus. Brit.)

RISSOA (OINA) NIVEA. *Ris. testâ subpyramidatâ, costis obliquè flexuosis ornatâ; spirâ elevatâ, apice acuminato; ultimo anfractu infrà spiraliter costato, aperturâ infrà subquadratâ; columellâ parvâ, breviùsculâ; labio externo incrassato.*

THE SNOWY RISSOA. Shell subpyramidal, ornamented with obliquely flexuous ribs; spire elevated, apex acuminated, last whorl spirally ribbed below; aperture rather square below; columella small, rather short; outer lip thickened.

ARTHUR ADAMS. Proc. Zool. Soc. 1851, p. 265.

Hab. Australia.

Species 92. (Mus. Brit.)

RISSOA (OINA) ALBIDA. *Ris. testâ pyramidatâ, acuminatâ, albâ, vel fulvâ, semipellucidâ, tenui; ultimo anfractu subinflato, lævigato, alteris costatis, versus apicem attenuatis; aperturâ subtrigonâ, columellâ brevi, truncatâ, labio externo crasso.*

THE WHITISH RISSOA. Shell pyramidal, acuminated, white or buff, half-transparent, thin; last whorl a little inflated, smooth, the others ribbed, attenuated towards the apex; aperture rather trigonal, columella short, truncated, outer lip thick.

C. B. ADAMS. Shells of Jamaica.

Hab. West Indies.

Species 93. (Mus. Brit.)

RISSOA (OINA) LÆVISSIMA. *Ris. testâ solidâ, breviter pyramidatâ, pallidè fulvâ, politâ; spirâ acuminatâ, anfractibus rectilateralibus; aperturâ subtrigonâ, parvâ, columellâ crassâ, brevi, truncatâ.*

THE VERY SMOOTH RISSOA. Shell solid, shortly pyramidal, pale fulvous, polished; spire acuminated, whorls straightened; aperture rather trigonal, small, columella thick, short, truncated.

C. B. ADAMS. Shells of Jamaica.

Hab. West Indies.

Species 94. (Mus. Brit.)

RISSOA (OINA) CATESBYANA. *Ris. testâ parvâ, pyramidatâ, fuscâ, breviùsculâ, costis obliquè flexuosis, validis ornatâ; spirâ brevi, anfractibus convexis; aperturâ semilunari, labio interno supernè incrassato; columellâ brevi, arcuatâ, labio externo producto, incrassato.*

CATESBY'S RISSOA. Shell small, pyramidal, brown, rather short, ornamented with obliquely flexuous strong ribs; spire short, whorls convex; aperture semilunar, inner lip thickened above; columella short, arched; outer lip produced, thickened.

D'ORBIGNY. Shells of Cuba.

Rissoa scalarella. C. B. Adams.

Hab. Jamaica, Cuba.

Species 95. (Mus. Brit.)

RISSOA (OINA) PRINCEPS. *Ris. pyramidatâ, attenuatâ, altâ, albâ, acuminatâ; anfractibus tenuissimè costatis et striatis; ultimo elongato, infrà lævigato; aperturâ subtrigonâ, labio externo tenui.*

THE PRINCE RISSOA. Shell pyramidal, attenuated, elevated, white, acuminated; whorls finely ribbed and striated, last elongated, smooth below; aperture subtrigonal, outer lip thin.

C. B. ADAMS. Shells of Jamaica.

Hab. Jamaica, West Indies.

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G.B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp.

RISSOA.

PLATE XI.

Species 96. (Mus. Brit.)

RISSOA (OINA) SULCIFERA. *Ris. testâ crassâ, pallidâ, pyramidatâ; anfractibus senis, spiraliter costatis, costis crassis, angulatis, supra suturam tribus, interstitiis serrato-foveolatis; ultimo anfractu subventricoso; aperturâ pyriformi, labio externo crasso, columellâ crassâ, subplanulatâ.*

THE GROOVED RISSOA. Shell thick, pale, pyramidal; whorls six, spirally ribbed, ribs thick, angular, three above the suture, interstices serrated in pits; last whorl subventricose; aperture pyriform, outer lip thick, columella thick, somewhat flattened.

TROSCHEL. —— ? MS. Brit. Mus.

Hab. Coast of Belgium.

Of a pale colour, more broadly pyramidal than *Rissoina Trochlearis*.

Species 97. (Mus. Brit.)

RISSOA (OINA) FLEXUOSA. *Ris. testâ pyramidatâ, acuminatâ, medio spiræ subconcavâ; costis longitudinalibus, supra medium angulatis spiraliter subnodosis munitâ; aperturâ brevi, subovatâ; labio interno supernè subcalloso, columellâ acutâ; labio externo intùs tumido.*

THE FLEXUOUS RISSOA. Shell pyramidal, acuminated, rather concave in the middle of the spire; provided with few longitudinal ribs, angular above the middle, slightly notched; aperture short, subovate, inner lip callous above; columella acute; outer lip tumid within.

GOULD. —— ? MS. Brit. Mus.

Hab. North America.

Species 98. (Mus. Brit.)

RISSOA (OINA) VILLICA. *Ris. testâ pyramidatâ, acuminatâ, albidâ; anfractibus novem, prope suturam angulatis, costis numerosis angulatis longitudinalibus munitis; ultimo infra medium spiraliter costato, costis longitudinalibus desinentibus; aperturâ parvâ, subpyriformi; columellâ infrà rectâ.*

THE STEWARDESS RISSOA. Shell pyramidal, acuminated, whitish; whorls nine, angular near the suture, provided with numerous angular longitudinal ribs, the last spirally ribbed in the middle, the longitudinal ribs ending; aperture small, somewhat pyriform; columella straight below.

GOULD. Smithsonian Catalogue.

Hab. Loochoo.

In the middle of the last whorl the longitudinal ribs cease, and the lower part is only ribbed spirally.

Species 99. (Mus. Brit.)

RISSOA (OINA) EULIMOIDES. *Ris. testâ breviùsculâ, albâ, politâ, lateraliter arcuatâ, acuminatâ; anfractibus senis, ultimo rotundo; aperturâ obliquè productâ, labio externo intùs incrassato; columellâ latâ, crassâ, brevi.*

THE EULIMA-SHAPED RISSOA. Shell rather short, white, polished, laterally arched, acuminated; whorls six, last rounded; aperture obliquely produced, outer lip thickened within; columella broad, thick, short.

A. ADAMS. Proc. Zool. Soc. 1851, p. 279.

Hab. Isl. Capul, Philippines.

Species 100. (Mus. Brit.)

RISSOA (OINA) SEMIPLICATA. *Ris. testâ parvâ, politâ, rectè pyramidatâ, tenui, semipellucidâ, tenuissimè longitudinaliter plicatâ; aperturâ parvâ, subpyriformi, labio externo crasso, rotundo; columellâ parvâ, acuminatâ.*

THE HALF-PLAITED RISSOA. Shell small, polished, smoothly pyramidal, thin, semipellucid, very finely longitudinally plaited; aperture small, rather pyriform, outer lip thick, rounded; columella small, acuminated.

PEASE. Proc. Zool. Soc. 1862.

Hab. Pacific.

Thinner, narrower, and more transparent than *S. lævissima*.

Species 101. (Mus. Brit.)

RISSOA (OINA) BROWNIANA. *Ris. testâ parvâ, pyramidatâ, acuminatâ, fulvâ, lævi; anfractibus senis, altiùsculis, ultimo subrotundo; aperturâ pyriformi, labio externo obliquè producto.*

BROWN'S RISSOA. Shell small, pyramidal, acuminated, fulvous, smooth; whorls six, rather elevated, the last somewhat round; aperture pyriform, outer lip obliquely produced.

D'ORBIGNY. Voyage dans l'Amérique Méridionale.

Hab. St. Vincent's.

Species 102. (Mus. Brit.)

RISSOA (OINA) TRITICEA. *Ris. testâ brevi, crassâ, albâ, pupæformi; anfractibus brevibus, costatis; costis arcuatis, lævibus, rotundis, infra medium anfractus ultimi desinentibus; ultimo anfractu brevi; aperturâ parvâ, subauriformi, anticè rotundatâ; labio crasso, rotundo; columellâ brevi, continuo.*

THE WHEAT RISSOA. Shell short, thick, white, pupa-shaped; whorls short, ribbed, ribs curved, smooth, round, ending below the middle of the last whorl, last whorl short; aperture small, rather auriform, anteriorly rounded, lip thick, rounded, columella short, continuous.

PEASE. Proc. Zool. Soc. 1860, p. 438.

Hab. Pacific Ocean.

Species 103. (Mus. Brit.)

RISSOA (OINA) PHILIPPIANI. *Ris. testâ turritâ, pallidè fulvâ, longitudinaliter crebrè costatâ, interstitiis cancellatis; anfractibus senis, rectis ad suturam angulatis; ultimo anfractu infrà spiraliter costatâ, aperturâ parvâ, subovatâ, columellâ latâ, subarcuatâ.*

PHILIPPI RISSOA. Shell turreted, pale fulvous, longitudinally closely ribbed, interstices cancellated; whorls six, straight, with an angle at the suture, last whorl spirally grooved on the under side; aperture small, subovate; columella broad, a little curved.

PFEIFFER. —— ? MS. Brit. Mus.

Rissoa cancellata. Philippi.

Hab. Cuba, Jamaica.

Species 104. (Mus. Brit.)

RISSOA (OINA) WOODWARDI. *Ris. testâ minutâ, breviter pyramidatâ, pallidissimè fulvâ; anfractibus senis, brevibus, longitudinaliter costatis; costis obliquè arcuatis, lævibus, rotundis; ultimo anfractu infrà unicostato; aperturâ parvâ, pyriformi; labio externo crasso, anfractu apicali rotundo.*

WOODWARD'S RISSOA. Shell minute, shortly pyramidal, very pale fulvous; whorls six, short, longitudinally ribbed, ribs obliquely arched, smooth, rounded, last whorl single-ribbed below; aperture small, pyriform; outer lip thick, apical whorl rounded.

CARPENTER. Shells of Mazatlan, p. 357.

Rissoa clandestina. C. B. Adams.

Rissoa firmata. C. B. Adams.

Hab. Mazatlan.

Species 105. (Mus. Brit.)

RISSOA (OINA) TROCHLEARIS. *Ris. testâ breviùsculâ, crassâ, rubro-fuscâ, spiraliter costis angulatis cinctâ; anfractibus senis, brevibus, medianis paulò inflatis; aperturâ albâ, subovatâ; columellâ crassâ, brevi; canali conspicuo, labio externo intùs incrassato, extùs crenato.*

THE COIL RISSOA. Shell rather short, thick, red-brown, spirally belted with angular ribs; whorls six, short, middle ones a little inflated; aperture white, subovate; columella thick, short; canal conspicuous, outer lip thickened within, crenated without.

CARPENTER. MS. Smithsonian Inst. and B. M.

Rissoa sulcifera var. Gould.

Rissoa ligata. Gould.

Rissoa annulata. Dunbar.

Hab. —— ?

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106.

107

108.

109.

110.

111.

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114.

a. 115. b.

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RISSOA.

PLATE XII.

Species 106. (Mus. Watson.)

RISSOA AURANTIACA. *Ris. testâ pallidè aurantiâ, altâ, spirâ subquadratâ; anfractibus quinis, convexiùsculis, altis, spiraliter tenuiter costatis, supernè costis obliquis, subdistantibus, longitudinalibus, sculptis, ultimo anfractu infrà spiraliter conspicuè bicostato; aperturâ ovatâ, labio lato, margine interno anticè acutè producto.*

THE ORANGE RISSOA. Shell pale orange, raised, spire a little in steps; whorls five, rather convex, spirally finely ribbed, sculptured above with oblique, rather distant longitudinal ribs, last whorl with two spiral ribs below; aperture ovate, lip broad, inner margin anteriorly sharply produced.

WATSON. Proc. Zool. Soc. 1873, p. 367, Pl. XXXIV. f. 3.

Hab. Madeira.

Species 107. (Mus. Watson.)

RISSOA CRISPA. *Ris. testâ parvâ, albidâ, undulatim spiraliter costatâ, gradatâ, costis crassis longitudinalibus flexuosis ornatâ; apice obtuso; anfractibus quaternis, supra medium angulatis, ultimo infrà spiraliter bicostato, umbilicato; aperturâ subtrigonâ, labio crasso, extùs crenato, suprà infràque angulato.*

THE CRISP RISSOA. Shell small, whitish, spirally ribbed in waves, ornamented with thick longitudinal flexuous ribs; apex obtuse; whorls four, angular above the middle, last with two spiral ribs below, umbilicated; aperture subtrigonal, lip thick, crenated outside, angular above and below.

WATSON. Proc. Zool. Soc. 1873, p. 369, Pl. XXXIV. f. 6.

Hab. Madeira.

Species 108. (Mus. Marrat.)

RISSOA MACANDREWI. *Ris. testâ parvâ, brevi, rubrofuscâ; anfractibus quinque, gradatis, angulatis, spiraliter crebrè costatis, costis perpendicularibus, crassis, supra medium angulatis munitis, ultimo infrà spiraliter unicostato; aperturâ obliquè subovatâ; costâ labiali crassâ, rotundâ, spiraliter liratâ.*

MACANDREW'S RISSOA. Shell small, short, reddish-brown; whorls five, in steps, angular, spirally closely ribbed, strengthened with perpendicular thick ribs, with an angle above the middle, last with a single spiral rib below; aperture obliquely subovate, labial rib thick, rounded, spirally ridged.

WATSON. Proc. Zool. Soc. 1873, p. 372, Pl. XXXIV. f. 8.

Hab. Gorgulho, Madeira.

Species 109. (Mus. Watson.)

RISSOA MONIZIANA. *Ris. testâ breviùsculâ, ferè albâ, spiraliter liratâ, liris rotundis, approximatis; apice acuto; anfractibus quaternis, brevibus, supra medium angulatis; aperturâ magnâ, rotundâ, costâ labiali subexpansâ, crassâ.*

MONIZI'S RISSOA. Shell rather short, almost white, spirally ridged, ridges rounded, close; apex acute; whorls four, short, angular above the middle; aperture large, rounded, labial rib rather expanded, thick.

WATSON. Proc. Zool. Soc. 1873, p. 369, Pl. XXXIV. f. 6.

Hab. Madeira.

Species 110. (Mus. Watson.)

RISSOA PICTA. *Ris. testâ parvâ, trochiformi, distanter spiraliter striatâ, maculis fuscis quadratis in series tres dispositis ornatâ; anfractibus quinque, convexis, ultimo magno; aperturâ subtrigonâ, labio crasso; columellâ crassâ, arcuatâ.*

THE PAINTED RISSOA. Shell small, top-shaped, distantly spirally striated, ornamented with brown square spots arranged in three rows; whorls five, convex, last large; aperture subtrigonal, lip thick; columella thick, arched.

JEFFREYS. Brit. Moll.

Hab. Madeira.

A narrower shell than *Rissoa depicta*, the whorls being more elongated and distinct.

Species 111. (Mus. Watson.)

RISSOA NOVARENSIS. *Ris. testâ parvâ, breviter ovato-conicâ, crassâ, pallidissimè fulvâ, costis longitudinalibus frequentibus liratis paulò arcuatis, infra medium desinentibus, et liris spiralibus tenuibus sculptâ, inter costas biseriatim fusco-maculatis, infra maculas spiraliter tricostatâ; anfractibus quaternis, brevibus, apicali rotundo, ultimo magno; aperturâ subrotundâ, labio crasso, rotundo.*

THE NOVARA RISSOA. Shell small, shortly ovate-conical, thick, very pale fulvous, sculptured with numerous ridged ribs a little curved, ending below the middle and slender spiral ridges, spotted with brown in two rows, three spiral ribs below the spots; whorls four, short, apical rounded, last large; aperture rather round, lip thick, rounded.

WATSON. Proc. Zool. Soc. 1873, p. 377, Pl. XXXV. f. 13.

Hab. Madeira.

Named after a frigate with which the shell had nothing to do.

Species 112. (Mus. Watson.)

RISSOA WATSONI. *Ris. testâ parvâ, tenuiùsculâ, trochiformi, liris spiralibus prominentibus rotundis cinctâ; anfractibus quaternis, apicali semirotundo, duobus medianis angulatis rugoso-costatis, inter costas castaneo maculatis, ultimo magno, angulato, supra angulum planulato, longitudinaliter costato, inter costas rubro-maculato, medio et infrà spiraliter solùm costato, costâ labiali haud marginem attingenti.*

WATSON'S RISSOA. Shell small, rather thin, trochus-shaped, girt with spiral prominent ridges; whorls four, apical semirotund, two middle angular, roughly ribbed, last large, angular, flattened, and longitudinally ribbed and spotted with red between the ribs above the angle, only spirally ribbed in the middle and below; labial rib not reaching the margin.

SCHWARTZ. Proc. Zool. Soc. 1873, Pl. XXXV. f. 11.

Hab. Madeira.

Species 113. (Mus. Watson.)

RISSOA PERMINIMA. *Ris. testâ parvâ, oblongâ, albâ, opacâ, lævigatâ; anfractibus quaternis, subelevatis, lateraliter rotundatis, ultimo magno, angustè umbilicato; aperturâ subovatâ, margine ferè integro, tenuiùsculo.*

THE VERY SMALL RISSOA. Shell small, oblong, white, opaque, smooth; whorls four, rather raised, laterally rounded, last large, narrowly umbilicated; aperture rather oval, margin nearly entire, rather thin.

MANZONI. Proc. Zool. Soc. 1873, p. 385.

Rissoa abjecta. Watson.

Hab. Madeira.

Species 114. (Mus. Watson.)

RISSOA ALBUGO. *Ris. testâ parvâ, tenui, semipellucidâ, subovato-trochiformi, fasciis lineisque punctorum rubrorum pictâ; anfractibus quinis, brevibus, convexis; aperturâ magnâ, anticè rotundâ, posticè acuminatâ, columellâ altâ, subarcuatâ.*

THE PEARLY FILM RISSOA. Shell small, thin, semipellucid, subovate-trochiform, painted with bands and lines of red spots; whorls five, short, convex; aperture large, anteriorly rounded, posteriorly acuminated, columella high, rather arched.

WATSON. Proc. Zool. Soc. 1873, p. 379.

Hab. Madeira.

The colouring consists in spiral and perpendicular rows of minute red spots.

Species 115. (Mus. Watson.)

RISSOA GIBBERULA. *Ris. testâ brevi, quadrangulari, solidâ, albâ, vel pallidè fulvâ, spiraliter angustè trifasciatâ, costis magnis obliquè flexuosis, distantibus, ad suturam acuminatis munitâ, spirâ gradatâ, suturâ concavâ; anfractibus brevissimis, ultimo infrà costâ spirali validâ desinenti, latè umbilicato; aperturâ parvâ, perpendiculariter ovatâ, margine tenui, anticè prominenti, costâ labiali latissimâ, crassâ.*

THE LITTLE HUMPED RISSOA. Shell short, quadrangular, solid, white or pale fulvous, with three spiral narrow bands, strengthened with large obliquely flexuous distant ribs, pointed at the suture, spire gradated, suture concave; whorls very short, the last ending below in a solid spiral rib, broadly umbilicated; aperture small, perpendicularly oval, margin thin, prominent in front, labial rib very broad, thick.

WATSON. Proc. Zool. Soc. 1876, p. 371, Pl. XXXIV. f. 7.

Hab. Madeira.

This beautiful little shell has the general appearance of a *Cancellaria*, but is a true *Rissoa*.

116.

117.

118.

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As.1.

120.

121.

As.2.

122.

123.

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RISSOA.

PLATE XIII.

Species 116. (Mus. Watson.)

RISSOA CORIACEA. *Ris. testâ parvâ, albâ, tenui, liris longitudinalibus tenuibus numerosis, eleganter flexuosis, et striis tenuissimis spiralibus sculptâ; anfractibus quinis, apicali semirotundo, medianis convexis, ultimo magno, subovali; aperturâ subovatâ, anticè rotundâ, posticè acuminatâ, labio integro, tenui.*

THE CORIACEOUS RISSOA. Shell small, white, thin, sculptured with longitudinal, thin, numerous ridges, elegantly flexuous and very fine spiral striæ; whorls five, apical half-round, middle convex, last large, subovate; aperture subovate, rounded anteriorly, acuminated posteriorly, lip entire, thin.

MANZONI. Proc. Zool. Soc. 1873, p. 389, Pl. XXXVI. f. 27.

Hab. Santa Cruz, Madeira.

A light inflated white shell, beautifully sculptured.

Species 117. (Mus. ——?)

RISSOA (JEFFREYSIA) OPALINA. *Ris. testâ subglobosâ, fusco-corneâ, diaphanâ, nitenti; anfractibus quaternis, apicali semirotundo, duobus medianis brevibus, convexissimis, ultimo magno, inflato; aperturâ subrotundâ, margine integro.*

THE OPALINE RISSOA. Shell subglobose, horny-brown, diaphanous, shining; whorls four, apical half-round, two middle short, very convex, last large, inflated; aperture rather rounded, margin entire.

JEFFREYS. Brit. Moll.

Hab. Channel Islands (littoral.)

Species 118. (Mus. Brit.)

RISSOA (JEFFREYSIA) DIAPHANA. *Ris. testâ parvâ, nitenti, fusco-corneâ, diaphanâ, subconicâ; spirâ elevatâ, conicâ, obtusâ; anfractibus quinis, gradatim crescentibus, convexis, ultimo subinflato; aperturâ subrotundâ, margine ferè continuo.*

THE TRANSPARENT RISSOA. Shell small, shining, horny-brown, transparent, rather conical; spire elevated, conical, obtuse; whorls five, gradually increased, convex, last rather inflated; aperture rather round, margin nearly continuous.

ALDER. —— ? Forbes and Hanley, Brit. Moll.

Hab. Great Britain. Rare, littoral.

Species 119. (Mus. Brit.)

RISSOA (OINA) FASCIATA. *Ris. testâ altâ, acuminatâ, pallidè fulvâ, castaneo-bifasciatâ, flexuosim crebricostatâ; anfractibus septem, declivibus; aperturâ subtrigonâ, canali conspicuo, labio externo crasso, rotundo; columellâ brevi, crassâ.*

THE BANDED RISSOA. Shell raised, acuminated, pale fulvous, with two chestnut bands, with numerous flexuous ribs; whorls seven, sloped; aperture subtrigonal, canal conspicuous, outer lip thick, rounded; columella short, thick.

ANGAS. Proc. Zool. Soc. 1851, p. 264.

Hab. New Zealand.

Species 120. (Mus. ——?)

RISSOA CASTANEA. *Ris. testâ elevatâ, lævigatâ, fuscâ, apice obtuso; anfractibus quinis, convexiùsculis, gradatim crescentibus, elevatis, ultimo majùsculo; aperturâ subpyriformi, margine crassiùsculo.*

THE CHESTNUT RISSOA. Shell raised, smooth, brown; apex obtuse; whorls five, rather convex, gradually increasing, raised, last rather large; aperture rather pyriform, margin rather thick.

JEFFREYS. —— ? Brit. Moll.

Hab. British Islands.

Species 121. (Mus. Brit.)

RISSOA (OINA) COSTULATA. *Ris. testâ parvâ, pupæformi, solidâ, longitudinaliter costatâ, albâ, supra medium anfractum castaneo interruptim fasciatâ; anfractibus octavis, apicalibus attenuatis, medianis subinflatis; aperturâ parvâ, margine tenui.*

THE SMALL RIBBED RISSOA. Shell small, pupa-shaped, solid, longitudinally ribbed, white, interruptedly chestnut-banded above the middle of the whorls

whorls eight; apical attenuated, middle a little swelled; aperture small, margin thin.

PEASE. —— ? MS. Brit. Mus.

Hab. Sandwich Islands.

Species 122. (Mus. —— ? Copied.)

RISSOA (JEFFREYSIA) GULSONÆ. *Ris. testâ parvâ, fulvescenti, lævigatâ, elevatâ, spirâ obtusâ; anfractibus quinis, convexis, gradatim crescentibus, ultimo angustiùsculo, angustissimè umbilicato; aperturâ subrotundo, anticè producto.*

WILSON'S RISSOA. Shell small, slightly fulvous, smooth, raised, spire obtuse; whorls five, convex, gradually increasing, last rather narrow, very narrowly umbilicated; aperture rather rounded, anteriorly produced.

CLARK. —— ? British Mollusca.

Hab. Sandwith, Weymouth, Guernsey.

Species 123. (Mus. Brit.)

RISSOA (OINA) AUSTRALIS. *Ris. testâ minutâ, albâ, costis nodosis, distantibus, longitudinalibus et liris paucis spiralibus profundè cancellatâ; anfractibus quinis, biangulatis; aperturâ subtrigonâ, canali conspicuo; columellâ crassâ, labio externo crasso, margine interno crenulato.*

THE AUSTRALIAN RISSOA. Shell very small, white, cancellated deeply with nodulous, distant, longitudinal ribs and few spiral ridges; whorls five, biangular; aperture subtrigonal, canal conspicuous; columella thick, outer lip thick, inner margin crenulated.

SOWERBY.

Hab. Australia.

A deeply cancellated little species, not exactly resembling any yet described.

(*ASSIMINEA.*)

Species 1. (Mus. Sowerby.)

ASSIMINEA GRAYANA. *Ass. testâ conicâ, lævigatâ, epidermide subviridi indutâ; spirâ acuminatâ; anfractibus quinis, declivibus, rectilateralibus; aperturâ magnâ, subtrigonâ, intùs castaneâ, margine continuo.*

GRAY'S ASSIMINEA. Shell conical, smooth, covered with greenish epidermis; spire acuminated; whorls five, sloped, straight-sided; aperture large, rather trigonal, chestnut within, margin continuous.

JEFFREYS. Trans. Linn. Soc.

Hab. Marshes of Kent.

Species 2. (Mus. Sowerby.)

ASSIMINEA LITTOREA. *Ass. testâ globosâ, subdiaphanâ, lævigatâ, fulvâ; anfractibus tribus, superioribus brevissimis, ultimo magno, inflato, angustè umbilicato; aperturâ latâ, margine tenui.*

THE SHORE ASSIMINEA. Shell globose, a little transparent, smooth, fulvous; whorls three, upper very short, last large, inflated, narrowly umbilicated; aperture broad, margin thin.

DELLE CHAIJE. —— ?

Hab. Shores at Weymouth, &c.

RISSOA.

	Plate.	Species
abjecta, Watson.	XII.	113
abyssicola, *Forbes*	III.	23
acicula, Risso	II.	11
acuta, Desmarest	II.	11
acuta, Draparnaud.	V.	41
albida *C. B. Adams*	X.	92
albugo, *Watson*	XII.	114
Alderi, *Jeffreys*	VI.	49
anatina, *Draparnaud*	VI.	51
annulata, Dunker.	XI.	105
approximata, Brown	IV.	35
Artensis, *Montrousier*.	IX.	84
aurantiaca, *Watson*.	XII.	106
auriscalpium, *Linnæus*	II.	11
australis, *Sowerby*.	XIII.	123
Barleei (Odost.), *Clarke*	VI.	52
Barleei, Jeffreys.	III.	27
Beanii, *Hanley*	IV.	37
Browniana, *D'Orbigny*	XI.	101
Bruguieri, *Payrandeau*	I.	5
Bryerea, *Montagu*	I.	8
Bureana, *Sowerby*	X.	90
cælata, *A. Adams*	II.	14
calathisca, *Montagu*	I.–V.	10
calathus, *Forbes, Hanley*	V.	39
Caledonica, *Crosse*	X.	86
canaliculata, *Schwartz*	VII.	50
Canariensis, *D'Orbigny*	IX.	82
cancellata, Recluz	III.	22
cancellata, *Costa*	IV.	32
carinata, *Costa*	II.	16
castanea, *Jeffreys*.	XIII.	120
Catesbyana, *D'Orbigny*.	X.	94
Chesnellii, *Michaud*	X.	89
cimex, Donovan	IV.	32
cimex, Linnæus	I.	2
cimicoides, *Forbes*.	III.	25
cincta, *A. Adams*	VIII.	71
cingillus, *Montagu*.	II.	15
clandestina, C. B. Adams	XI.	104
clathrata, *A. Adams*	IX.	76
communis, Forbes	V.	40
concinna, *A. Adams*	I	9
coreacea, *Manzoni*	XIII.	116
Corilea, *D'Orbigny*	III.	24
costata, *Adams*	III.	20
costulata, *Alder*.	III.	29
costulata (Rissoina), *Pease*	XIII.	121
crassa, *Angas*.	VIII.	70
crassilabrum, *Pease*	VII.	59
crebrisulcata, *Sowerby*	VI.	56
crenulata, *Michaud*	IV.	32
crispa, *Watson*.	XII.	107
crystallina, *Brown*.	II.	19
Cumingii, *Reeve*.	I.	4
cyclostoma, Recluz.	III.	26
decussata, *Montagu*	IX.	78
deformis, *Sowerby*.	VII.	63
denticulata, *Risso*	IV.	1*
depicta, *Montagu*	IX.	83
Deshayesiana, *Recluz*.	VII.	62
diaphana, *Alder*.	XIII.	118
D'Orbignyana, *A. Adams*	I.	7
Eulimoides	XI.	99
Europæa, *Risso*	I.	2
exigua, Michaud.	III.	20
eximia, *Jeffreys*	VI.	52
fasciata, *Angas*	XIII.	119
fimbriata, *Souverbie*	V.	45
firmata, C. B. Adams.	XI.	104
flexuosa, *Gould*	XI.	97
fortis, *C. B. Adams*	IV.	30
Freminvillea, Risso	I.	2
fulgida, *Adams*	VI.	50
fulva, *Michaud*	VI.	55
gentilissiana, *Crosse*	V.	44
gibberula, *Watson*.	XII.	115
glabrata, Megherle	II.	19
gracilis, Macgillivray.	V.	40
granulata, Philippi.	I.	2
Grayana, *Jeffreys* (Assim)	XIII.	1
Gulsonæ, *Clarke*	XIII.	122
Guerinii (——?)	III.	29
hyalina, Desmoulins	IV.	33
incerta, *Souverbie*	V.	45
inconspicua, *Alder*	IV.	34
insignis, *Ad. & Reeve*.	VII.	61
insolita, *Deshayes*	V.	43

* Erroneously referred to Plate I. fig. 1.

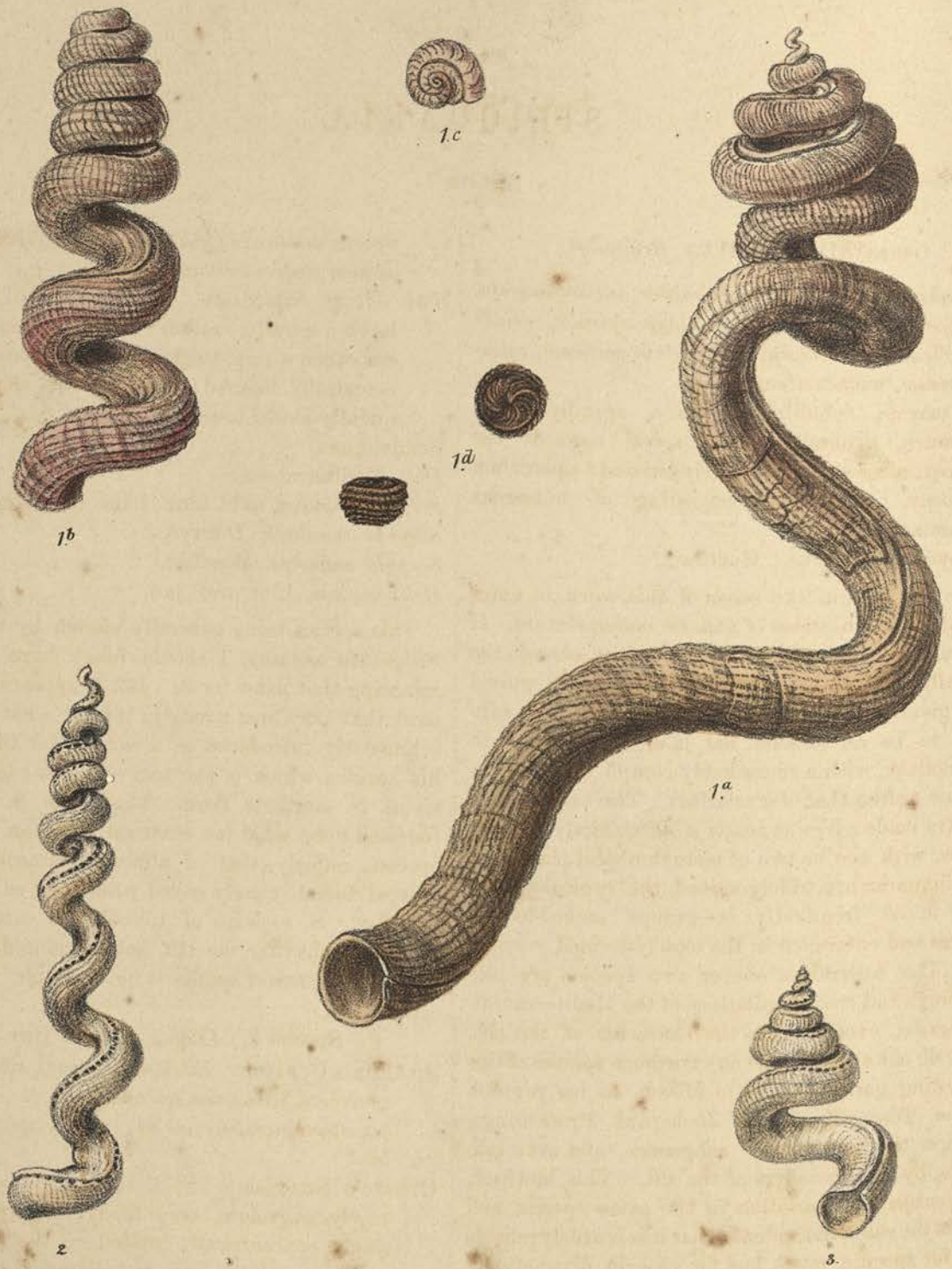
	Plate.	Species.
interrupta, Johnson	IV.	36
labiosa, *Montagu.*	II.	12
lactea, *Desmoulins*	III.	22
ligata, *Gould*	XI.	105
lignea, *Thorpe.*	IX.	81
lilacina, Recluz.	IV.	33
littorea, *Delle Chiaje* (Assim)	XIII.	2
lævissima	X.	93
lævissima, *C. B. Adams.*	X.	93
Macandrewi, *Watson*	XII.	108
maculata, *Sowerby.*	IV.	31
mammillata, Risso.	I.	2
marginatus, Montagu.	II.	11
membranacea, *Lovèn.*	VIII.	67
minutissima, Michaud	V.	40
Mohrenstrerni, *Deshayes*	VII.	57
Moniziana, *Watson*	XII.	109
monilis, Fleming.	II.	16
monodonta, *Bevan.*	VIII.	73
Montagui, *Payraudeau*	I.	3
nitida, *A. Adams*	VI.	53
nivea, *A. Adams.*	X.	91
nodicincta, *A. Adams.*	VIII.	72
Novarensis, *Watson*	XII.	111
opalina, *Jeffreys.*	XIII.	117
parva, *Costa*	IV.	36
perminuta, *Manzoni*	XII.	113
Philippiana, *Pfeiffer*	XI.	103
picta, *Jeffreys*	XII.	110
plicata, Mühlfeldt.	III.	20
princeps, *C. B. Adams*	X.	95
proxima, *Alder*	II.	18
pulcherrima, *Jeffreys.*	V.	47
pulchra, Johnson	III.	28
punctura, *Montagu.*	IV.	35
punctnrata, Macgillivray	IV.	35
pyramidalis, *A. Adams.*	VIII.	66
reticulata, *Sowerby*	VIII.	75
rosea, *Deshayes.*	V.	42
rubra, *Adams.*	VI.	54
rufilabris.	IV.	33
rupestris, Forbes.	II.	15
Sagraiana, *D'Orbigny.*	IX.	80
scalariana, *A. Adams.*	I.	6
scalaroides, *Adams.*	I.	1
semiglabrata, *A. Adams.*	VII.	58
semistriata, *Montagu.*	III.	28
semiplicata, *Pease.*	XI.	100
similis, Scacchi	III.	29
Smithii, *Angas*	VIII.	58
soluta, *Philippi*	VI.	48
spirata. *Sowerby.*	II.	17
splendida, *Eichio*	IX.	79
striata, Quoy	II.	14
striata, *Montagu.*	V.	40
striaticostata, *D'Orbigny*	X.	88
striatula, *Montagu.*	II.	16
stricta, *Menke.*	X.	87
striolata, *A. Adams*	VII.	65
subconcinna, *Souverbie*	IX.	85
sublutea, Adams.	IV.	36
subsulcata, Philippi	III.	28
subumbilicata, Berkely.	III.	27
sulcifera, *Troschel*	XI.	96
supracostata —— ?.	IV.	38
tristriata, Thomson.	III.	28
triticea, *Pease.*	XI.	102
trochlearis, *Carpenter.*	XI.	105
turricula, *Angas.*	VIII.	69
ulvæ, *Pennant*	III.	27
unifasciata, Montagu.	VI.	54
variabilis, *Mühlfeldt.*	IX.	77
variegata, *Angas.*	VII.	64
ventricosa, *Desmoulins*	III.	21
ventricosus, Dillwyn	V.	41
ventrosa, *Montagu.*	V.	41
venusta, *Philippi*	II.	13
villica, *Gould*	XI.	98
violacea, *Desmarest.*	VIII.	74
virginea, Brown.	II.	18
vitræa, *Montagu.*	II.	19
vittata, Donovan.	II.	15
Watsoni, *Schwartz.*	XII.	112
Woodwardi, *Carpenter*	XI.	104
Zetlandica, *Montagu*	III.	26

MONOGRAPH

OF THE GENUS

SILIQUARIA.

"Holy, holy, holy! Lord God Almighty!
All Thy works shall praise Thy Name, in earth, and sky, and sea."—*Bishop Heber.*



G.B. Sowerby del et Lith

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SILIQUARIA.

PLATE I.

Genus SILIQUARIA. *Bruguière.*

Testa marina, tubuliformis, spiraliter inciso-fissurata, versus apicem plerumque laxè spiralis, deindè irregulariter contorta; operculum corneum, cylindricum, multilaminatum.

Shell marine, tubuliform, with a spirally-incised fissure, generally loosely spiral towards the apex, afterwards irregularly twisted; operculum horny, cylindrical, consisting of numerous laminæ.

Synonym. TENAGODUS. Guettard.

It is not within the scope of this work to enter critically into questions of generic nomenclature. If it were, we should still be disinclined to change the generally adopted and almost universally recognised name given above. The animal was formerly supposed to be an annelid, but is now ascertained to be a mollusk, with a remarkably complicated operculum, not unlike that of a solarium. The examination we have made gives us nearly a dozen fairly distinct species, with one or two of more doubtful character. The siliquariæ are widely spread, the typical species being found frequently in groups embedded in sponges and entangled in the closely-twined roots of fuci. The Australian one or two species are like ponderous and coarse imitations of the Mediterranean *S. anguina*, excepting in the character of the slit. There do not appear to be any northern species of this interesting genus. M. Otto Mörch, in his revision of the *Tenagodi* in the Zoological Proceedings, arranges the species into subgenera, and even into genera, by the characters of the slit. This, however, is so subject to variation in the same species, and even in the same individuals, that it is scarcely reliable even for specific, much less for generic, distinction.

Species 1. (Fig. *a*, *b*, *c*, *d*, Mus. Brit. Sowb.)

SILIQUARIA OBTUSA. *Sil. testâ elongatâ, anfractibus magnis, utrinque spiraliter subtenue liralis, intùs lævibusculis, extùs incrassatis, concentricè fissuratis, aperturâ rotundâ; fissurâ spirali simplici, versus apicem frequenter clausâ.*

THE OBTUSE SILIQUARIA. Shell elongated, whorls large, spirally, rather finely lirated, rather smoother within, thickened on the outside, concentrically fissured; spiral fissure simple, frequently closed towards the apex.

SCHUMACHER.

Hab. Mediterranean.

Serpula anguina, as of Linn. Lam. Phil. &c.

Serpula annularis, Dillwyn.

Serpula angustus, Montfort.

Helix incisus, Linn. test. jun.

This species being generally known by the name *Siliquaria anguina*, I should much have preferred retaining that name for it. But it appears perfectly clear that Born was wrong in taking what Linnæus erroneously introduced as a variety for the type of his species, which is the true *Serpula anguina* Linnæus, *S. muricata* Born. The name *S. obtusa* is founded upon what is a common variation in several species, namely, that of almost commencing with several broad, closely coiled whorls, so as to form a cylinder. *S. anguina* of Linnæus is carefully described as having the slit subarticulated, whereas that of the present species is quite simple.

Species 2. (Fig. *a*, *b*, Mus. Brit.)

SILIQUARIA CUMINGII. *Sil. testâ elongatâ, albâ, angustè convolutâ, tenuissimè spiraliter striata, extùs infrà tenuiter concentricè incisâ; fissurâ spirali articulatâ.*

CUMING'S SILIQUARIA. Shell elongated, white, narrowly convolute, very finely spirally striated, finely concentrically incised on the lower part outside; spiral fissure articulated.

MÖRCH. Proc. Zool. Soc. 1860.

Hab. Isl. Ticao, Philippines; var. *b*. Japan.

Fig. *b* is a somewhat broader variety of this finely sculptured shell. The slit is articulated so as to present a chain-like appearance.

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SILIQUARIA.

PLATE II.

Species 3. (Mus. Brit.)

SILIQUARIA PONDEROSA. *Sil. testâ griseo-fuscescenti crassissimo, magno; anfractibus magnis, prope apicem et infrà latè convolutis et approximatis, supra fissuram undulato-dentatis, intùs lævìusculis, extùs incrassatis, rudè concentricè fissuratis, ultimo laxato; fissurâ spirali in anfractibus superioribus clausâ, tùm denticulatâ vel articulatâ, deindè simplici.*

THE PONDEROUS SILIQUARIA. Shell brownish grey, very thick, large; whorls large, broadly convoluted and approximate near the apex and below; wavily dentated above the fissure, rather smooth inside, thickened outside, roughly concentrically fissured; last loose; spiral fissure closed in the upper whorls, then denticulated or articulated, afterwards simple.

MÖRCH. (Tenagodus) Proc. Zool. Soc. 1860.

Hab. Port Essington.

We admit this species on account of the apparent distinctness of form, which may nevertheless be only analogous to the turbinated variety of *Siliquaria anguina*.

Species 4. (Mus. Brit.)

SILIQUARIA TROCHLEARIS. *Sil. testâ albidâ, rugosâ, prope apicem et versus medium densè convolutâ; tubâ magnitudine mediocri; anfractibus subrugatis, concentricè rudè fissuratis; fissurâ spirali rotundè et conspicuè articulatâ.*

THE PULLY SILIQUARIA. Shell whitish, rugose, closely convoluted near the apex and towards the middle; tube moderate in size; whorls rather rough, concentrically rudely fissured; spiral fissure roundly and conspicuously articulated.

MÖRCH. (Tenagoda) Proc. Zool. Soc. 1860, p. 408.

Hab. Philippines.

The coiled portion of this species is close and compact, and the regular rounded articulations give a chain-like appearance to the fissure.

Species 5. (Fig. *a*, *b*, Mus. Brit.)

SILIQUARIA LACTEA. *Sil. testâ parvâ, candidâ, vel fuscâ et violaceâ, plerumque irregulariter contortâ; tubâ parvâ, subrugosâ, rarò striatâ; anfractibus apicalibus spiraliter pyramidatis; alteris subæqualibus; fissurâ articulatâ, prope apicem per laminam partim clausâ.*

THE MILKY SILIQUARIA. Shell small, white, or brown and violet, generally irregularly contorted; tube small, rather rough, rarely striated; apical whorls spirally pyramidal; others nearly equal; fissure articulated, partly closed near the apex by a lamina.

LAMARCK. Hist. Nat. Anim. s. Vert V. p. 338.

Hab. Port Essington.

This little siliquaria is very gregarious, forming conglomerated masses. Fig. *b* represents a small portion of one of these masses.

Species 6. (Mus. Brit.)

SILIQUARIA AUSTRALIS. *Sil. testâ magnâ, crassâ, versus apicem pyramidatâ, deindè laxatâ; tubâ magnâ, regulariter crescenti, intùs tenuissimè striatâ, extùs crassâ, rugosâ, concentricè fissuratâ; fissurâ spirali rotundè articulatâ, prope aperturam hianti; marginibus crassis.*

THE AUSTRALIAN SILIQUARIA. Shell large, thick, pyramidal towards the apex, then loosened; tube large, regularly increased, very finely striated on the inner side, thick, rugose on the outer, concentrically fissured; spiral fissure roundly articulated, gaping near the aperture; margin thick.

QUOY et GAIMARD. Voyage de l'Astrolabe.

Hab. Australia.

Although thicker and coarser in texture than the typical species, this species resembles it so much that it would be difficult to distinguish the two were it not for the round chain-like articulations of the spiral fissure. That of *S. obtusa* is quite simple.

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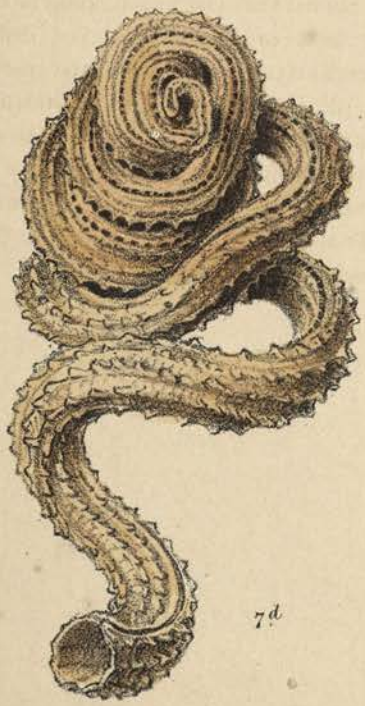

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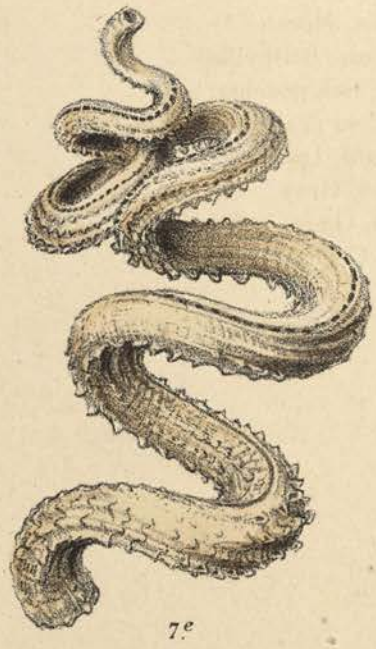

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SILIQUARIA.

PLATE III.

Species 7. (Fig. *a*, *b*, *c*, *d*, *e*, Mus. Brit. Sowb.)

SILIQUARIA ANGUINA. *Sil. testâ plerumque crassâ, latè et irregulariter contortâ, distanter spiraliter liratâ, liris acutè squamatis vel echinatis; tubâ plerumque lentè crescenti; fissurâ spirali angustissimâ in partibus oblongo-articulatâ.*

THE SNAKE SILIQUARIA. Shell generally thick, broadly and irregularly twisted, distantly spirally ridged; ridges sharply squamose or spined; tube generally very slowly increasing; spiral fissure very narrow, with oblong articulations in parts.

LINNÆUS. Syst. Nat. p. 1267.
Serpula muricata, Born.
Tenagoda anguina, Mörch.
Siliquaria polygona, Blainville.
Siliquaria ruber, Schumacher.
Siliquaria papillosa (?) Rees.
Siliquaria lævigata, Lamarck.
Siliquaria sulcata, Gray.
Serpula echinata, Gmel.
Hab. Moluccas, Ceylon.

It is not without hesitation that the varieties in form and colouring represented in the plate are united under one specific name. M. Mörch applies the name *T. muricata* to the pale yellow variety (fig. *d*), and that of *T. ruber* to the Ceylon purple, thick-shelled, flat-whorled variety. We thought at first that the specimen fig. *e* might represent a distinct species, the tube and whorls being rounder and more regularly increasing, and the ridges not being so strongly developed. But having the young specimen (fig. *c*) before us, with the apical whorls purple and smooth, and the lower pale and spinous, while in some parts of the most rounded whorls the ridges could easily be traced, we concluded that the union could be better maintained than the separation. It is not difficult, even with comparatively few specimens, to trace the species through all its forms. The rounded and angular, smooth and spinose, thick and slender, scales without ridges and ridges without scales, the dark purple, yellow, and white colours, the articulated, closed, and simple slit are to be found within a few specimens, and sometimes in a single one.

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SILIQUARIA.

PLATE IV.

Species 8. (Mus. Brit.)

SILIQUARIA SENEGALENSIS. *Sil. testâ parvâ, rugosâ, roseâ vel pallidè fulvâ; tubâ magnitudine mediocri, vix crescenti; anfractibus regularibus paucis, intùs sublævigatis, extùs concentricè rugatis; fissurâ spirali articulatâ, tùm versus aperturam simplici.*

THE SENEGAL SILIQUARIA. Shell small, rugose, pink or pale fulvous; tube of middle size, scarcely increasing; regular whorls few, rather smooth on the inner side, concentrically wrinkled on the outer; spiral fissure articulated, then simple towards the aperture.

RECLUS. Revue Zoologique.

Tenagoda incisa, Mörch, vix Chemn.

Hab. Senegal, Zanzibar?

In the rosy variety there is a strong resemblance to pink coral; the other varieties are unknown to us.

Species 9. (Mus. Brit.)

SILIQUARIA BERNHARDI. *Sil. testâ albidâ, fulvo-nebulatâ, tenui elongatâ, angustè et laxè convolutâ, versus apicem irregulariter pyramidatâ; tubâ angustâ, crenulatim striatâ; fissurâ spirali rotundato-articulatâ.*

BERNHARD'S SILIQUARIA. Shell white, clouded with fawn, thin, elongated, narrowly and loosely twisted, irregularly pyramidal towards the apex; tube narrow, crenulately striated; spiral fissure roundly articulated.

MÖRCH.

Hab. Senegal.

A large group in the British Museum, containing hundreds of specimens, testifies to the very gregarious nature of this species.

Species 10. (Mus. Brit.)

SILIQUARIA ENCAUSTICA. *Sil. testâ parvâ, crassâ, rugosâ, irregulariter pyramidatâ; tubâ parvâ, intùs lævigatâ, extùs incrassatâ, rudè concentricè rugatâ et fissuratâ; fissurâ spirali in anfractibus superioribus clausâ, tùm articulatâ, deindè simplici.*

THE ENAMELLED SILIQUARIA. Shell small, thick, rugose, irregularly pyramidal; tube small, smooth on the inner side, thickened on the outer, roughly concentrically wrinkled and fissured; spiral fissure closed in the upper whorls, then articulated, afterwards simple.

MÖRCH. Proc. Zool. Soc. 1860, p. 408.

Hab. Ceylon.

But for the very strongly wrinkled exterior, this shell would seem to bear a rather strong resemblance to *S. trochlearis*. In the latter species, however, the slit is articulated throughout.

Species 11. (Mus. Brit.)

SILIQUARIA TOSTUS. *Sil. testâ parvâ, ferrugineâ, ad apicem intensè fuscâ; tubâ angustâ, lævissculâ; anfractibus ad apicem orbiculatis; fissurâ spirali, articulatâ, utrinque lineâ denticulatâ marginatâ.*

THE BAKED SILIQUARIA. Shell small, ferrugineous, very strong brown at the apex; tube narrow, rather smooth; whorls orbicular at the apex; spiral fissure articulated, bordered on both sides with a denticulated line.

MÖRCH. Proc. Zool. Soc. 1860, p. 405.

Hab. Ceylon.

Species 12. (Mus. Brit.)

SILIQUARIA REENTZII. *Sil. testâ parvâ, supernè et ad medium spiraliter pyramidatâ, fuscâ; tubâ parvâ, extùs concentricè fissuratâ, fissurâ spirali articulatâ.*

REENTZI'S SILIQUARIA. Shell small, spirally pyramidal above and at the middle, brown; tube small, concentrically fissured outside; spiral fissure articulated.

MÖRCH. Proc. Zool. Soc. 1865.

Hab. —— ?

Species 13. (Mus. Brit.)

SILIQUARIA TAHIETENSIS. *Sil. testâ lævigatâ, pallidè fulvâ; tubâ angustâ, laxè contortâ, liratâ, inter liras cancellatâ; fissurâ spirali angustâ, simplici.*

THE TAHITIAN SILIQUARIA. Shell smooth, pale, fulvous; tube narrow, loosely twisted, ridged, cancellated between the ridges; spiral fissure narrow, simple.

MÖRCH. Proc. Zool. Soc.

Hab. South Seas.

We have only a fragment of this species, which M. Mörch describes as differing from *Sil. lactea* in the greater size, the stronger ridges, the cancellated interstices, and the narrow slit.

Species not known.

Sil. dubius, *Defranc;* Sil. gigas, *Lisson;* Sil. porosa, *Boch*; Sil. (Ten.) Aquillæ, *Mörch;* Sil. (Ten.) cylindrella, *Mörch*; Sil. (Pyxipoma) Mobii, *Mörch.*

MONOGRAPH

OF THE GENUS

CYRENA.

"Nature is God's pure work, unsullied by sin; and therefore the study of it is a pure delight to those who love Him."—*Dean Goulburn.*

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2b

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CYRENA.

PLATE I.

Genus CYRENA. *Lamarck.*

MOLLUSCUM ACEPHALOPODUM, *bimusculosum, fluviatile vel subfluviatile. Testâ æquivalvis, inæquilateralis, crassa, plus minusve orbicularis, tumidâ, concentricè sulcatâ, vel rugatâ, epidermide corneâ, solidâ indutâ; cardine crasso, dentibus cardinalibus duobus aut tribus, lateralibus elongatis, nonnunquam striatis; pallii impressione integrâ, vel vix sinuatâ.*

MOLLUSK ACEPHALOPODOUS, bimuscular, fluviatile or subfluviatile. Shell equivalve, inequilateral, thick, more or less orbicular, tumid, concentrically grooved or wrinkled, covered with a horny solid epidermis; hinge thick, cardinal teeth two or three, lateral elongated, sometimes striated; palleal impression entire, or very slightly sinuated.

The shells composing this genus inhabit rivers and estuaries in tropical America, India, China, Australia, the Philippines and Islands of the Pacific. Although principally of freshwater habits, some are found in brackish water, and in the mud of mangrove swamps.

The distinctions between *Corbicula*, *Batissa*, and *Cyrena* seeming to me scarcely of generic importance, I have united them in this work under one generic term. It may, however, be convenient in the following list of specific numbers to designate the section to which each species belongs:—

Section 1. BATISSA. Lateral teeth straight and of moderate length. Species 1–21, 28.

Section 2. CORBICULA. Lateral teeth long, curved, and angular. Species 45–48, 51–61, 66–70, 72–77, 79–101.

Section 3. CYRENA. 22–27, 29–44, 49, 50, 62–65, 68, 71, 78, 102–114.

Species 1. (Mus. Brit.)

CYRENA GIGANTEA. *Cyr. testâ magnâ, ponderosâ, subovatâ, valdè inæquilaterali, irregulariter sulcatâ, epidermide crassâ, nigrâ indutâ; intùs albâ, incrassatâ, partim purpureo tinctâ; latere antico brevi, postico producto, obscurissimè angulato; cardine lato, dentibus cardinalibus integris, laterali antico brevi; ligamento magno, elongato.*

THE GIGANTIC CYRENA. Shell large, ponderous, rather oval, very inequilateral, irregularly grooved, covered with a thick black epidermis; interior white, thick, tinted in parts with purple; anterior side short, posterior produced, very obscurely angular; hinge broad, cardinal teeth entire, anterior lateral short; ligament large, long.

PRIME. MS. Brit. Mus.

Hab. Philippines?

This species, having a short lateral tooth in front, is not very characteristic of the first or *Batissa* section.

Species 2. (Mus. Brit.)

CYRENA LENTICULARIS. *Cyr. testâ rotundâ, lenticulari, altâ, subæquilaterali, irregulariter rugatâ, epidermide solidâ, subviridi, nitenti indutâ, intùs ferè omninò purpureo vivido suffusâ; cardine subangusto, dente cardinali centrali bifido, lateralibus æqualiter elongatis, compressis, tenuissimè serratis.*

THE LENTICULAR CYRENA. Shell rounded, lenticular, high, subequilateral, irregularly wrinkled, covered with a solid rather green epidermis, suffused within nearly all over with vivid purple; hinge rather narrow, central cardinal tooth bifid, lateral equally elongated, compressed, very finely striated.

DESHAYES. Proc. Zool. Soc. 1854.

Hab. Philippines.

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CYRENA.

PLATE II.

Species 3. (Mus. Brit.)

CYRENA TRIQUETRA. *Cyr. testâ subtrigonâ, altâ, subcompressâ, lævi, epidermide subviridi, partim nigrescenti indutâ; latere antico brevissimo, declivi; umbonibus elevatis; latere postico angulato, margine dorsali declivi.*

THE THREE-CORNERED CYRENA. Shell rather trigonal, high, rather flat, smooth, covered with a rather green epidermis, blackish in parts; anterior side very short, sloped; umboes raised; posterior side angular, dorsal margin sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 13.

Hab. Philippines.

Species 4. (Mus. Brit.)

CYRENA ROTUNDATA. *Cyr. testâ rotundâ, tumidâ, inæquilaterali, irregulariter rugatâ et sulcatâ, epidermide solidâ, subviridi, nitenti, medio radiatim striatâ indutâ; intùs sparsim violascenti; latere antico brevi, compresso; latere postico tumidissimo, sublævigato, margine laterali subquadrato.*

THE ROUNDED CYRENA. Shell round, tumid, inequilateral, irregularly wrinkled and grooved, covered with a solid, greenish, shining epidermis, radiately striated in the middle; sparingly purpled within; anterior side short, compressed; posterior area very tumid, rather smooth, lateral margin rather square.

LEA. Trans. Am. Ph. Soc. Pl. XVII. f. 51.

Hab. East Indies.

More tumid in the middle, and more depressed at the dorsal margin than *Cyrena lenticularis*.

Species 5. (Mus. Brit.)

CYRENA OBESA. *Cyr. testâ subovatâ, lævigatâ, castaneâ, tumidâ, distanter leviter sulcatâ; latere antico brevi, tenuiter rugato, declivi; latere postico obscurè triangulato; margine dorsali rectiùsculo.*

THE FAT CYRENA. Shell subovate, smooth, chestnut, tumid, distantly slightly grooved; anterior side short, finely wrinkled, sloped; posterior side obscurely three-angled; dorsal margin rather straight.

HINDS. Voy. Sulphur.

Hab. Feejee Islands.

The posterior side is much produced, and the margin modified in shape by the three radiating obsure angles.

Species 6. (Mus. Brit.)

CYRENA KERAUDRENI. *Cyr. testâ magnâ, crassâ, subovatâ, posticè distanter, anticè crebrè sulcatâ, epidermide nigrâ indutâ; intùs margine cardinali postico purpureo maculato, medio subradiato, latere antico brevi, declivi; latere postico producto, subacuminato, ligamento maximo, elongato.*

KERAUDREN'S CYRENA. Shell large, thick, subovate, posteriorly distantly, anteriorly closely sulcated; covered with a black epidermis; with a purple spot on the posterior cardinal margin within, somewhat rayed in the middle; anterior side short, sloped; posterior side produced, a little acuminated, ligament very large, long.

LESSON. Voy. de la Coquille. Pl. II. f. 3.

Hab. Philippines.

Has very much the form and appearance of a large dark Cyprina.

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CYRENA.

PLATE III.

Species 7. (Mus. Brit.)

CYRENA INSIGNIS. *Cyr. testâ elongato-subquadratâ, subcompressâ, anticè rugis elevatis, undulatis, nonnullis bifurcatis liratâ, posticè lævigatâ; latere antico brevi, rotundo; latere postico subquadrato, areâ dorsali impressâ obliquè radiato; umbonibus depressis; margine ventrali rectiùsculo.*

THE WONDERFUL CYRENA. Shell elongated-subquadrate, rather compressed, anteriorly ridged with raised, undulating, some of them bifurcated wrinkles, posteriorly smooth; anterior side short, round; posterior side rather square, obliquely rayed with a dorsal area; umboes depressed, ventral margin rather straight.

DESHAYES. Proc. Zool. Soc. 1854, p. 18.

Hab. Philippines.

The wrinkles on the anterior surface of this shell are very remarkable.

Species 8. (Fig. *a*, *b*, Mus. Brit.)

CYRENA MINOR. *Cyr. testâ ovato-subrotundâ, depressâ, compressâ, subviridi-stramineâ, medio albo biradiato, lævigato; intùs viridè purpureo radiato; latere antico breviter lirato, brevi, valdè declivi; latere postico laticri; umbonibus obtusis; margine dorsali depresso; cardine angusto, dente laterali antico breviùsculo.*

THY SMALLER CYRENA. Shell ovate-roundish, depressed, compressed, greenish straw, with two white rays, smooth; rayed with bright purple within; anterior side shortly ridged, short, much sloped; posterior side wider; umboes obtuse; dorsal margin depressed; hinge narrow, lateral anterior tooth rather short.

PRIME. MS. Mus. Brit.

Hab. ——

This little shell being rayed within and without, and being more depressed at the dorsal margin than most of the group to which it belongs, may show it to be a distinct species, rather than the young of some other.

Species 9. (Mus. Brit.)

CYRENA UNIONIFORMIS. *Cyr. testâ crassâ, oblongâ, reniformi, subarcuatâ, epidermide nigrâ, rugatâ indutâ; latere antico brevi, margine dorsali declivi; umbonibus parvis incurvis, depressis, latere postico producto, margine dorsali arcuato, margine ventrali excavato; ligamento maximo.*

THE UNIO-SHAPED CYRENA. Shell thick, oblong, kidney-shaped, rather arched, covered with a black, rough epidermis; anterior side short, dorsal margin sloped; umboes small, incurved, depressed; posterior side produced, dorsal margin arched; ventral margin excavated; ligament very large.

PRIME. Proc. Zool. Soc. 1860, p. 319.

Hab. —— ?

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G.B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp

CYRENA.

PLATE IV.

Species 10. (Mus. Brit.)

CYRENA INFLATA. *Cyr. testâ tumidissimâ, crassâ, valdè inæquilaterali, epidermide rŭgosâ, crassâ, nigrâ indutâ, intùs versus marginem densè purpureâ, ad marginem nigrescenti; margine cardinali lato, fulcro latissimo, dente antico brevi, magno; latere antico brevi, angusto; latere postico expanso, inflato, ad marginem biangulato; margine dorsali elevato.*

THE INFLATED CYRENA. Shell very tumid, thick, very inequilateral, covered with a rough, thick black epidermis, deep purple within towards the margin, deepening into black at the margin; cardinal margin broad, fulcrum very broad; anterior tooth short, large; anterior side short, narrow; posterior side expanded, inflated, with two angles at the margin; dorsal margin raised.

PRIME. Proc. Zool. Soc. 1860, p. 20.

Hab. Nicobar Islands.

Species 11. (Mus. Brit.)

CYRENA VENERIFORMIS. *Cyr. testâ ovatâ, solidâ, castaneâ, tumidâ; intùs purpureo partim suffusâ; latere antico brevi, declivi; ferè usque ad medium subregulariter lirato; latere postico inflato, tumido, ad marginem rotundato; umbŏnibus prominentibus.*

THE VENUS-SHAPED CYRENA. Shell ovate, solid, chestnut, tumid, suffused with purple inside; anterior side short, sloped, rather regularly ridged as far as the middle; posterior side inflated, tumid, rounded at the margin; umboes prominent.

SOWERBY.

Batissa fuscata. Prime.

Cyrena fuscata of Lamarck belongs to the section separated by authors as a genus under the name *Corbicula*. It is a very inconvenient practice, in naming new shells, to repeat a name already applied to a species in what has recently been considered the same genus.

Species 12. (Mus. Brit.)

CYRENA PRODUCTA. *Cyr. testâ magnâ, altâ, subrotundâ, epidermide fusco-subviridi nitenti indutâ, medio lævigatâ, utroque latere distanter sulcatâ; intùs roseâ, densè purpurascenti, latere antico brevissimo, areâ depressâ sublunulari, ad marginem sinuatâ; latere postico subquadrato, margine dorsali elevato; umbonibus elevatis, prominentibus, incurvis; ligamento magno, brevi.*

THE PRODUCED CYRENA. Shell large, elevated, rather round, covered with a greenish brown shining epidermis; smooth in the middle, distantly grooved on each side; rose, shading into deep purple within; anterior side very short, sinuated at the margin by a depressed lunule-like area; posterior side rather square, dorsal margin elevated; umboes raised, prominent, turned inwards; ligament large, short.

DESHAYES (Batissa). Proc. Zool. Soc. 1854, p. 13.

Hab. ——?

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G.B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp

CYRENA.

PLATE IV.

Species 10. (Mus. Brit.)

CYRENA INFLATA. *Cyr. testâ tumidissimâ, crassâ, valdè inæquilaterali, epidermide rugosâ, crassâ, nigrâ indutâ, intùs versus marginem densè purpureâ, ad marginem nigrescenti; margine cardinali lato, fulcro latissimo, dente antico brevi, magno; latere antico brevi, angusto; latere postico expanso, inflato, ad marginem biangulato; margine dorsali elevato.*

THE INFLATED CYRENA. Shell very tumid, thick, very inequilateral, covered with a rough, thick black epidermis, deep purple within towards the margin, deepening into black at the margin; cardinal margin broad, fulcrum very broad; anterior tooth short, large; anterior side short, narrow; posterior side expanded, inflated, with two angles at the margin; dorsal margin raised.

PRIME. Proc. Zool. Soc. 1860, p. 20.

Hab. Nicobar Islands.

Species 11. (Mus. Brit.)

CYRENA VENERIFORMIS. *Cyr. testâ ovatâ, solidâ, castaneâ, tumidâ; intùs purpureo partim suffusâ; latere antico brevi, declivi, ferè usque ad medium subregulariter lirato; latere postico inflato, tumido, ad marginem rotundato; umbonibus prominentibus.*

THE VENUS-SHAPED CYRENA. Shell ovate, solid, chestnut, tumid, suffused with purple inside; anterior side short, sloped, rather regularly ridged as far as the middle; posterior side inflated, tumid, rounded at the margin; umboes prominent.

SOWERBY.

Batissa fuscata. Prime.

Cyrena fuscata of Lamarck belongs to the section separated by authors as a genus under the name *Corbicula*. It is a very inconvenient practice, in naming new shells, to repeat a name already applied to a species in what has recently been considered the same genus.

Species 12. (Mus. Brit.)

CYRENA PRODUCTA. *Cyr. testâ magnâ, altâ, subrotundâ, epidermide fusco-subviridi nitenti indutâ, medio lævigatâ, utroque latere distanter sulcatâ; intùs roseâ, densè purpurascenti, latere antico brevissimo, areâ depressâ sublunulari, ad marginem sinuatâ; latere postico subquadrato, margine dorsali elevato; umbonibus elevatis, prominentibus, incurvis; ligamento magno, brevi.*

THE PRODUCED CYRENA. Shell large, elevated, rather round, covered with a greenish brown shining epidermis; smooth in the middle, distantly grooved on each side; rose, shading into deep purple within; anterior side very short, sinuated at the margin by a depressed lunule-like area; posterior side rather square, dorsal margin elevated; umboes raised, prominent, turned inwards; ligament large, short.

DESHAYES (Batissa). Proc. Zool. Soc. 1854, p. 13.

Hab. ——?

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G.B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp.

CYRENA.

PLATE V.

Species 13. (Mus. Brit.)

CYRENA AUSTRALIS. *Cyr. testâ ovatâ, crassâ, inflatâ, castaneâ, intùs posticè roseo-purpurascenti radiatâ; latere antico brevi, angustato, subacuminato, subregulariter lirato, prope marginem dorsalem areâ depressâ subsinuato; latere postico tumidissimo, radiatim biangulato; umbonibus ovatis, deprêssis.*

THE AUSTRALIAN CYRENA. Shell ovate, thick, inflated, chestnut, posteriorly rayed with rose-purple within; anterior side short, narrow, rather acuminated, nearly regularly ridged; slighly sinuated near the dorsal margin by a depressed area; posterior side very tumid, radiately biangular; umboes ovate, depressed.

DESHAYES. Proc. Zool. Soc. 1854, p. 14.

Hab. South Australia.

Species 14. (Mus. Brit.)

CYRENA TENEBROSA. *Cyr. testâ ovato-oblongâ, compressâ; intùs posticè densè purpureâ, extùs epidermide fumoso-castaneâ indutâ; latere antico brevi, angusto, obtuso, liris acutiùsculis rugato; umbonibus depressis; medio lœvi, complanato; latere postico producto, lato, validè biangulato; margine dorsali rectiùsculo, subelevato.*

THE SHADOWY CYRENA. Shell ovate-oblong, compressed; deep purple posteriorly within, covered outside with a smoky chestnut epidermis; anterior side short, narrow, obtuse, wrinkled with rather sharp ridges; umboes depressed, middle smooth, flat; posterior side produced, broad, with two strong angles, dorsal margin somewhat straight, rather raised.

HINDS. Voy. Sulphur.

Hab. Feejee Islands.

Species 15. (Mus. Brit.)

CYRENA VIOLACEA. *Cyr. testâ ovato-oblongâ, subcompressâ, castaneâ, intùs violaceo suffusâ; latere antico liris distinctis, nonnullis intercalatis ad medium extensis sculpto, margine dorsali declivi; latere postico producto, obscurè radiatim triangulato; margine dorsali elevato, arcuato, margine ventrali paulò excavato.*

THE VIOLET CYRENA. Shell ovate-oblong, rather compressed, chestnut; suffused with violet within; anterior side sculptured with distinct ridges, some intercalated, extending to the middle, dorsal margin sloped; posterior side produced, with three obscure radiating angles; dorsal margin raised, arched, ventral margin a little excavated.

LAMARCK. Anim. s. Vert. Chénu: Illus. Conch. Pl. VII. f. 5.

Hab. Indian Ocean.

There can be little certainty as to the identification of this Lamarckian species. The specimen figured resembles in form and compression the one figured by Chénu as Lamarck's shell. It is, however, uncoated.

Species 16. (Mus. Brit.)

CYRENA FORTIS. *Cyr. testâ subcompressâ, subovatâ, crassâ; intùs dentibus lateralibus subœqualibus, elongatis, serratis, cardinalibus bifidis armatâ; extùs epidermide viridi-fuscâ, crassâ, subrugosâ indutâ; latere antico sulcis crebris sculpto; latere postico sulcis distantibus rugato; latè angulato, post angulum liris divergentibus subnodosis rugato.*

THE STRONG CYRENA. Shell rather compressed, rather oval, thick; armed within with rather equal elongated, serrated, lateral and bifid cardinal teeth, covered outside with a greenish-brown, rather rough epidermis; anterior side sculptured with numerous ridges; posterior side wrinkled with distant sulci; broadly angular, behind the angle wrinkled with diverging, rather nodose ridges.

PRIME. Proc. Zool. Soc. 1860, p. 320.

Hab. New Caledonia.

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G.B. Sowerby del et Lith.

Vincent Brooks Day & Son Imp

CYRENA.

PLATE VI.

Species 17. (Mus. Brit.)

CYRENA CHILDRENI. *Cyr. testâ subrotundâ, compressâ, lævigatâ, fusco-viridescenti, intùs carneo violaceoque nebulatâ; latere antico brevi, declivi, liris paucis brevibus rugatâ; latere postico subinflato, rotundatim angulato; margine dorsali rectiùsculo, margine ventrali convexo, margine postico obliquè subquadrato.*

CHILDREN'S CYRENA. Shell rather rounded, compressed, smooth, greenish brown; within clouded with flesh tint and violet; anterior side short, sloped, wrinkled with few short ridges; posterior side rather inflated, roundly angular; dorsal margin rather straight, ventral margin convex, posterior margin obliquely subquadrate.

GRAY. MS. Mus. Brit.

Hab. Philippines.

Species 18. (Mus. Brit.)

CYRENA HUMEROSA. *Cyr. testâ ovato-subtrigonâ, castaneâ, latere antico brevi, declivi, subacuminato, conspicuè lirato; umbonibus depressis, obtusis; latere postico obtusè biangulato, lævigato, versus angulum posticum tumido, gibboso, margine dorsali elevato, subalato.*

THE SHOULDERED CYRENA. Shell ovate-subtrigonal, chestnut, anterior side short, sloped, rather acuminated, conspicuously ridged; umboes depressed, obtuse; posterior side with two obtuse angles, smooth, very tumid and gibbous, dorsal margin raised, somewhat winged.

DESHAYES. Proc. Zool. Soc. 1854, p. 14.

Hab. —— ?

Although a little resembling *Cyr. triquetra*, Desh., this species is not so elevated at the dorsal margin, nor so directly sloped in front.

Species 19. (Mus. Brit.)

CYRENA JAYENSIS. *Cyr. testâ rotundâ, altâ, solidâ, tumidâ, castaneâ, versus marginem viridescenti; latere antico brevissimo, ad marginem areâ depressâ sinuato, sulcis brevibus rugato; umbonibus rotundis, prominentibus; latere postico inflato, rotundo, margine dorsali elevato; ligamento magno.*

JAY'S CYRENA. Shell round, high, solid, tumid, chestnut, becoming greenish towards the margin; anterior side very short, sinuated at the margin by a depressed area, wrinkled with short grooves; umboes rounded, prominent; posterior side inflated, round, dorsal margin raised; ligament large.

LEA. Trans. Am. Ph. Soc. Vol. 5. Pl. XVII, f. 52.

Hab. Waigiori.

Species 20. (Mus. Brit.)

CYRENA GRACILIS. *Cyr. testâ subrotundâ, complanatâ, fumoso-stramineâ, intùs carneolo purpureoque suffusâ; latere antico brevissimo, areâ depressâ angustâ, supernè declivi; latere postico obliquè angulato, post angulum liris divaricatis distantibus rugato; margine dorsali ferè recto, margine postico obliquè subtruncato.*

THE SLENDER CYRENA. Shell rather round, flat, smoky straw, within suffused with flesh and purple; anterior side very short, with a narrow depressed area, sloped above; posterior side obliquely angular, wrinkled behind the angle with diverging ridges; dorsal margin nearly straight, posterior margin obliquely truncated.

PRIME. Proc. Zool. Soc. 1860, p. 319.

Hab. —— ?

Species 21. (Mus. Brit.)

CYRENA CORBULOIDES. *Cyr. testâ obliquè subtrigonâ, subcompressâ, altâ, complanatâ; vividè viridi-fuscescenti; epidermide undulatim striatâ indutâ; latere antico brevissimo, margine laterali valdè declivi, umbonibus elevatis; latere postico obscurè trigono, margine ventrali rectiùsculo.*

THE CORBULA-SHAPED CYRENA. Shell obliquely subtrigonal, subcompressed, high, flat, bright brownish green, covered with a wavily striated epidermis, anterior side very short, lateral margin much sloped downwards, umboes raised; posterior side obscurely trigonal, ventral margin rather straight.

DESHAYES. Proc. Zool. Soc. 1854, p. 14.

Hab. Louisiade Archipelago.

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G. B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp.

CYRENA.

PLATE VII.

2nd Division, Cyrena proper. Anterior lateral tooth short, not serrated.

Species 22. (Mus. Brit.)

CYRENA PAPUA. *Cyr. testâ ovatâ, compressâ, stramineâ, concentricè subdistanter fimbriatim striatâ; versus umbones utrinque areâ impressâ marginatâ; latere antico brevi, rotundo, margine dorsali convexâ, declivi; latere postico producto, radiatim angulatâ, margine dorsali prope umbones convexo, tùm declivi, margine terminali breviter truncato; umbonibus depressis.*

THE PAPUA CYRENA. Shell ovate, compressed, straw-coloured, concentrically rather distantly fringe-striated; bordered on each side near the umboes with an impressed area; anterior side short, round, dorsal margin convex, sloped downwards; posterior side produced, radiately angular, dorsal margin convex near the umboes, then sloped downwards, terminal margin shortly truncated; umboes depressed.

LESSON. Guérin: Mag. Zool. Pl. XI.

Hab. —— ?

Species 23. (Mus. Brit.)

CYRENA BENGALENSIS. *Cyr. testâ solidâ, tumidâ, crassâ, subtrigonâ, fusco-nigrescenti, rugoso-striatâ; latere antico alto, brevissimo, declivi, amplo; latere postico producto, margine dorsali longè declivi, ad terminum truncato, ante angulum viæ excavato.*

THE BENGAL CYRENA. Shell solid, tumid, thick, subtrigonal, blackish-brown, roughly striated; anterior side high, very short, sloped, full; posterior side produced, dorsal margin with a long slope, truncated at the end, very slightly excavated in front of the angle.

LAMARCK. Anim. sans Vert. Cyrena, 10.

Hab. Bengal.

Species 24. (Mus. Brit.)

CYRENA CYPRINOIDES. *Cyr. testâ magnâ, altissimâ, rotundo-subquadratâ, subviridè fuscâ, rugoso-striatâ; latere antico brevissimo, subtus umbones excavato, areâ sublunulari impresso; umbonibus incurvis, ferè terminalibus; latere postico subquadrato, radiatim impresso, margine dorsali arcuato, margine terminali sinuato.*

THE CYPRINA-LIKE CYRENA. Shell large, very high, roundly subquadrate, greenish-brown, roughly striated; anterior side very short, excavated under the umboes, impressed with a lunule-like area; umboes incurved, nearly terminal; posterior side rather square, radiately impressed, dorsal margin arched, terminal margin sinuous.

GUOY. Voyage de l'Astrolabe. Pl. LXXXII, f. 1-3.

Hab. —— ?

Species 25. (Mus. Brit.)

CYRENA TRIANGULARIS. *Cyr. testâ trigonâ, altissimâ, compressâ, concentricè tenuiter, minutè undatim striatâ; latere antico brevissimo, versus marginem ventralem acuminatim producto, subtus umbones subexcavato, ferè perpendiculariter declivi; umbonibus altissimis; latere postico versus marginem radiatim impresso, margine terminali subtruncato, margine dorsali longè arcuatim declivi.*

THE TRIANGULAR CYRENA. Shell trigonal, very high, compressed, concentrically finely, minutely, wavily striated; anterior side very short, acuminately produced towards the ventral margin, somewhat excavated under the umboes, almost perpendicularly sloped; umboes very high; posterior side radiately impressed not far from the margin, dorsal margin with a long, arched slope.

METCALFE. MS. Cum Coll.

Hab. —— ?

Species 26. (Mus. Brit.)

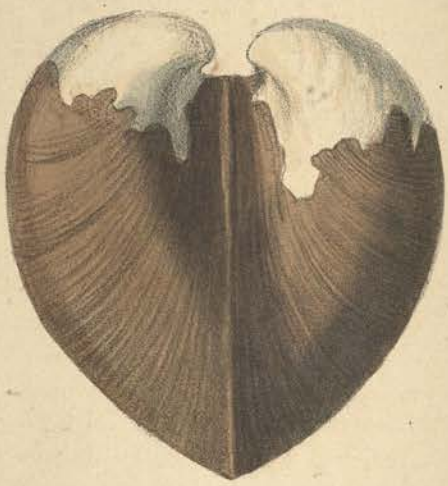
CYRENA SINUOSA. *Cyr. testâ subquadratâ, altiùsculâ, ponderosâ, epidermide fusco-nigrescenti rugoso-striatâ indutâ; latere antico brevi, infrà subrotundâ; umbonibus ferè terminalibus; latere postico producto, subquadrato, sulcis duobus sinuatis radiatim impressâ, margine terminali sinuato, margine dorsali arcuatim declivi.*

THE SINUOUS CYRENA. Shell subquadrate, rather high, ponderous, covered with a blackish-brown roughly-striated epidermis; anterior side short, roundish below, umboes nearly terminal; posterior side produced, rather square, radiately impressed with two sinuated grooves, terminal margin sinuous, dorsal margin sloped with a curve.

DESHAYES. Proc. Zool. Soc. 1854, p. 18.

Hab. Ceylon.

27.a



27.b

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G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

CYRENA.

PLATE VIII.

Species 27. (Fig. *a*, *b*, Mus. Brit.)

CYRENA CARDIFORMIS. *Cyr. testâ tenuiùsculâ, subtrigonâ, profundâ, inflatâ; obscurè fuscâ, intùs nonnunquam purpureo-nebulatâ, extùs concentricè subdistanter striatâ; latere postico brevi, excavato, areâ semilunari impresso; latere postico producto, declivi, ad terminum breviter truncato; umbonibus inflatis, rotundis; margine ventrali convexo, prope terminum posticum paulò concavo.*

THE HEART-SHAPED CYRENA. Shell rather thin, subtrigonal, deep, inflated; dull brown, sometimes clouded with purple inside, outside concentrically rather distantly striated; posterior side produced, sloped, shortly truncated at the end; umboes inflated, rounded; ventral margin convex, a little concave near the end.

DESHAYES. —— ? MS. in Cum. Coll.

Hab. Payta, Peru.

Species 28. (Mus. Brit.)

CYRENA DIVARICATA. *Cyr. testâ crassâ, tumidiùsculâ, nigrescenti, concentricè, undulatim, latè striatâ; intùs pallidè carneâ; latere antico brevissimo, declivi, subexcavato; umbonibus depressis, ferè terminalibus, latere postico tumido, angulato, post angulum et paulò ante divaricatim rugato, margine dorsali arcuato.*

THE DIVERGENT CYRENA. Shell thick, rather tumid, nearly black, with concentric undulating broad striæ; pale, fleshy within; anterior side very short, sloped, slightly excavated; umboes depressed, almost terminal, posterior side tumid, angular, behind and a little before the angle divergently wrinkled; dorsal margin arched.

DESHAYES. Proc. Zool. Soc. 1874, p. 17.

Hab. New Guinea.

Species 29. (Mus. Brit.)

CYRENA PANAMAENSIS. *Cyr. testâ inflatâ, globosâ, altâ, fusco-subviridi, latere antico subtus umbones rotundè excavato, infrà rotundè producto; umbonibus elevatis, rotundis; margine ventrali convexo; latere postico angulato, ad angulum obscurissimè carinato, areâ postangulari cuneatâ, planulatâ.*

THE PANAMA CYRENA. Shell inflated, globose, high, greenish-brown; anterior side roundly excavated under the umboes, roundly produced below; umboes elevated, round; ventral margin convex; posterior side angular; very obscurely keeled at the angle, postangular area cornered, flat.

PRIME. ——? MS. Mus. Brit.

Hab. Panama.

Species 30. (Mus. Brit.)

CYRENA MARITIMA. *Cyr. testâ inflatâ, subglobosâ, altissimâ, epidermide papyraceâ indutâ, concentricè striatâ; margine dorsali utrinque declivi; latere postico angulato, ad angulum obtusè carinato; umbonibus rotundis, inflatis.*

THE MARITIME CYRENA. Shell inflated, subglobose, very high, covered with a papyraceous epidermis, concentrically striated; dorsal margin sloped on each side; posterior side angular, with an obscure keel at the angle; umboes rounded, inflated.

C. B. ADAMS. Proc. Zool. Soc. 1854, p. 355.

Hab. —— ?

Species 31. (Fig. *a* and Fig. *b*, *c*, Pl. X. Mus. Brit. and Sowerby.)

CYRENA CAROLINIENSIS. *Cyr. testâ altâ, brevi, tumidâ, valdè inflatâ, epidermidè rugoso-striatâ, olivaceâ vel pallidè fulvâ indutâ, intùs subtus umbones carneâ, ad latera cardinemque purpureo-maculatâ et radiatâ; latere antico brevissimo, declivi; umbonibus altis, tumidis, prominentibus; latere postico lato, subtruncato, margine dorsali declivi.*

THE CAROLINA CYRENA. Shell raised, short, tumid, much inflated, covered with a roughly striated olive or pale fulvous epidermis, fleshy within, under the umboes spotted and rayed, with purple at the sides and hinge; anterior side very short, sloped; umboes high, tumid, prominent; posterior side broad, slightly truncated, dorsal margin sloped.

BOSC. Nich. Enc. Am. Pl. I. f. 10.

Hab. S. Carolina, N. America.

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G.B Sowerby del. et Lith.

Vincent Brooks Day & Son Imp.

CYRENA.

PLATE IX.

Species 32. (Mus. Sowerby.)

CYRENA OLIVACEA. *Cyr. testâ tenui, stramineâ, subviridi, subtrigonâ, undulatim striatâ, intùs purpureâ, dentibus cardinalibus parvis, lateralibus anticis breviùsculis; latere antico declivi; latere postico angulato, margine dorsali declivi, laterali obliquè truncato, infrà acuminato, margine ventrali ante angulum excavato, umbonibus subcentralibus.*

THE OLIVACEOUS CYRENA. Shell thin, straw-coloured, greenish, subtrigonal, undulately striated, inside purple, cardinal teeth small, anterior lateral rather short; anterior side sloped, posterior side angular, dorsal margin sloped, lateral obliquely truncated; acuminated below; ventral margin excavated in front of the angle; umboes nearly central.

CARPENTER. —— ? MS.

Hab. California.

Species 33. (Mus. Brit.)

CYRENA OBSCURA. *Cyr. testâ crassâ, trigonâ, subcompressâ, elevatissimâ, epidermide nigrâ, crassâ, densè striatâ indutâ; latere antico brevi, subexcavato, areâ lunulari impresso; latere postico angulato, valdè declivi, margine ventrali ante angulum subexcavato.*

THE OBSCURE CYRENA. Shell thick, trigonal, somewhat compressed, much elevated, covered with a black, thick, closely striated epidermis; anterior side short, rather excavated, impressed with a lunular area; posterior side angular, much sloped, ventral margin a little hollow in front of the angle.

PRIME. Proc. Zool. Soc. 1860, p. 321.

Hab. New Granada.

Species 34. (Mus. Brit.)

CYRENA FONTAINEI. *Cyr. testâ altissimâ, subtrigonâ, crassâ, compressâ; densè castaneâ, striatâ; latere antico brevi, declivi, margine ventrali rotundo; umbonibus elevatis subacuminatis; latere postico subacutè angulato, valdè declivi, infrà acuminato.*

FONTAINE'S CYRENA. Shell very high, subtrigonal, thick, compressed; deep chestnut, striated; anterior side short, sloped, ventral margin rounded; umboes elevated, rather acuminated; posterior side rather acutely angular, much sloped, acuminated below.

D'ORBIGNY. —— ? MS.

Hab. —— ?

Species 35. (Mus. Brit.)

CYRENA VENTRICOSA. *Cyr. testâ subovatâ, crassâ, tumidâ, pallidè stramineâ, lævigatâ; latere antico brevi, rotundo; latere postico producto, margine dorsali declivi, margine terminali truncato, infrà subcuneato.*

THE VENTRICOSE CYRENA. Shell subovate, thick, tumid, pale straw, smooth; anterior side short, rounded; posterior side produced, dorsal margin sloped, terminal margin slightly truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 16.

Hab. Australia.

Species 36. (Mus. Brit.)

CYRENA ESSINGTONENSIS. *Cyr. testâ ovatâ, castaneâ, distanter concentricè fimbriato-striatâ; latere antico brevi, declivi, areâ lunulari impresso; latere postico producto, margine dorsali arcuato; margine ventrali convexo; umbonibus depressis.*

THE PORT-ESSINGTON CYRENA. Shell ovate, chestnut, distantly concentrically fringe-striated; anterior side short, sloped, impressed with a lunular area; posterior side produced, dorsal margin arched; ventral margin convex; umboes depressed.

DESHAYES. Proc. Zool. Soc. 1854, p. 19.

Hab. Port-Essington, Australia.

Species 37. (Mus. Brit.)

CYRENA OBLONGA. *Cyr. testâ oblongo-ovatâ, crassâ, undulatim subdistanter striatâ, stramineo-rubescenti; latere antico breviùsculo, subtus umbones excavato, areâ lunulari impresso; latere postico producto, obscurè angulato, ad terminum truncato, margine dorsali declivi.*

THE OBLONG CYRENA. Shell oblong-ovate, thick, rather distantly wavily striated, reddish straw, anterior side rather short, hollow under the umboes, impressed with a lunular area; posterior side produced, with an obscure angle, truncated at the end; dorsal margin sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 341.

Hab. —— ?

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39.b

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G. B. Sowerby del et Lith

Vincent Brooks Day & Son Imp.

CYRENA.

PLATE X.

Fig. 31, *b*, *c*. CYRENA CAROLINIENSIS. (See Pl. VIII.)

Species 38. (Mus. Brit.)

CYRENA NITIDULA. *Cyr. testâ ovatâ, subcompressâ, concentricè tenuiter striatâ, stramineâ, anticè breviori, subacuminatâ, posticè magis expansâ, obtusâ ; umbonibus subdepressis, margine dorsali posticè paulò, anticè valdè declivi.*

THE SHINING LITTLE CYRENA. Shell ovate, subcompressed, concentrically finely striated, straw-coloured, in front rather short, subacuminated, posteriorly more expanded, obtuse; umboes rather depressed, dorsal margin a little sloped behind, much in front.

DESHAYES. Proc. Zool. Soc. 1854, p. 21.

Hab. —— ?

Species 39. (Mus. Brit.)

CYRENA SUBLOBATA. *Cyr. testâ magnâ, crassâ, oblongâ, epidermide fuscâ, rugosâ indutâ; latere antico brevissimo, sub umbones areâ lunulari convexâ impresso; latere postico producto, radiatim bisulcato, margine dorsali arcuatim declivi, margine terminali leviter sinuatim lobato.*

THE SUBLOBED CYRENA. Shell large, thick, oblong, covered with a brown rough epidermis ; anterior side very short, impressed with lunular convex area ; posterior side produced, with two radiating grooves, dorsal margin sloped in an arch, terminal margin sinuously slightly lobed.

DESHAYES —— ? MS. Cum. Col.

Hab. The Louisiade Archipelago.

In some degree like *Cyrena Cyprinoides*, but more oblong, and having a double groove at the back, which gives a lobed character to the posterior margin.

Species 40. (Mus. Brit.)

CYRENA CALEDONICA. *Cyr. testâ subquadratâ, crassâ, epidermide crassâ, rugosâ, olivaceo-fuscâ, subdistanter striatâ, striis squamoso-fimbriatis; latere antico brevissimo, areâ lunulari impresso, margine laterali ferè perpendiculari; umbonibus subterminalibus; latere postico subquadrato, margine dorsali arcuato, margine terminali sinuato.*

THE CALEDONIAN CYRENA. Shell subquadrate, thick, covered with a thick, rough, olive-brown epidermis, distantly striated, striæ with a scaly fringe ; anterior side very short, impressed with a lunular area ; lateral margin almost perpendicular ; umboes nearly terminal; posterior side rather square, dorsal margin arched, terminal margin sinuated.

GASSIES. —— ? MS. Brit. Mus.

Hab. New Caledonia.

Species 41. (Mus. Brit.)

CYRENA FALLAX. *Cyr. testâ obliquè subtrigonâ, tumidâ, medio distanter, ad latera densè striatâ, sordidè olivaceâ, prope umbones subgibbosâ; latere antico brevi, declivi, areâ lunulari, convexâ impressâ; umbonibus elevatis, ovatis, margine dorsali declivi, margine postico-laterali breviter truncato.*

THE FALLACIOUS CYRENA. Shell obliquely subtrigonal, tumid, striated distantly in the middle, closely at the sides, dull olive, rather gibbous near the umboes ; anterior side short, sloped, lunule, impressed with a convex lunular area, umboes elevated, oval, posterior area sloped, dorsal margin sloped, postero-lateral margin shortly truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 15.

Hab. —— ?

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47. b.

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G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

CYRENA.

PLATE XI.

(Species 42 inadvertently omitted.)

Species 43. (Mus. Brit.)

CYRENA TRIGONA. *Cyr. testâ ovatâ, subinæquilaterali, stramineâ, concentricè tenuiter striatâ; latere postico majori, subarcuatim declivi, prope marginem angulato, margine ventrali convexo; latere antico subacuminato, umbonibus versus marginem anticum inclinatis; margine antico valdè declivi.*

THE TRIGONAL CYRENA. Shell ovate, rather inequilateral, straw-coloured, concentrically finely striated; posterior side the larger, sloped in a slight curve, angular near the margin, ventral margin convex; anterior side slightly acuminated, umboes inclined towards the anterior margin, anterior margin much sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 344. Hanley, Conch. Ind. Pl. 155.

Hab. Pondicherry.

This is given on the authority of the British Museum (as type) and the Conch. Ind., but the shell is far from being of a trigonal form.

Species 44. (Mus. Brit.)

CYRENA BENSONI. *Cyr. testâ subovatâ, subcompressâ, stramineâ, tenuissimè radiatâ, tenuiter undulatim concentricè rugatâ, æquilaterali; latere antico prope marginem angulato; latere postico angulato, ad angulum divaricatim rugatâ; umbonibus centralibus intùs extùsque rubris.*

BENSON'S CYRENA. Shell subovate, subcompressed, straw-coloured, very finely rayed, wrinkled with fine concentric undulations, equilateral; anterior side angulated near the margin; posterior side angular, divergently wrinkled at the angle; umboes central, red inside and out.

DESHAYES. Proc. Zool. Soc. 1876, p. 345.

Hab. River Jumna.

Said to be notable for its general smoothness. To the writer it appears most remarkable for the acutely angular diverging wrinkles on the posterior angle.

Species 45. (Mus. Hanley).

CYRENA IRAVADICA. *Cyr. testâ trigono-subovatâ, altâ, ventricosâ, concentricè profundè rugatâ, ad umbones cæruleâ; infrà olivaceâ, intùs purpureâ, umbonibus subcentralibus, elevatis, margine dorsali utrinque declivi; margine ventrali validè convexo.*

THE IRAWADDY CYRENA. Shell trigono-subovate, elevated, ventricose, concentrically deeply rugose, blue at the umboes, olivaceous below, purple within; umboes nearly central, raised, dorsal margin sloped on each side; ventral margin very convex.

BLANDFORD. MS. Hanley. Conch. Ind. Pl. 155.

Hab. River Irawaddy, Pegu, Ava.

Species 46. (F. *a*, *b*, Mus. Sowerby.)

CYRENA EROSA. *Cyr. testâ altissimâ, solidiùsculâ, subæquilaterali, trigonâ; intùs omnino, prope marginem densissimè purpuratâ, dentibus lateralibus elongatis, serratis, cardinalibus tribus, elongatis; latere antico breviùsculo, areâ semilunatâ, planulatâ, latere postico infrà subproducto, umbonibus elevatissimis; liris concentricis distantibus, tenuibus.*

THE TRIANGULAR CYRENA. Shell very high, rather solid, subequilateral, trigonal, purpled within all over, very deeply near the margin; lateral teeth elongated, serrated; cardinal three; anterior side rather short, with a semilunar, flattened area; posterior side a little produced below, umboes much raised; concentric ridges distant, thin.

DESHAYES. MS. Proc. Zool. 1854, p. 354.

Cyrena triangularis. Deshayes?

Hab. ——?

Species 47. (*a*, *b*, Mus. Sowerby.)

CYRENA RADIATA. *Cyr. testâ altâ, obliquè subtrigonâ, tumidâ, regulariter subdistanter liratâ, intùs utrinque radiatim purpureo-fasciatâ; latere antico breviùsculo, areâ depressâ, lunulari; latere postico obliquè paulò producto, radiatim angulato; umbonibus elevatis, acuminatis, marginibus lateralibus declivibus.*

THE RAYED CYRENA. Shell elevated, obliquely subtrigonal, tumid, regularly rather distantly ridged, radiately banded within on each side with purple; anterior side rather short, with a depressed lunular area; posterior side a little produced obliquely, radiately angular; umboes elevated, acuminated, lateral margins sloped.

HANLEY. ——? MS.

Hab. ——?

Species 48. (Mus. Hanley.)

CYRENA OCCIDENS. *Cyr. testâ ovatâ, subcompressâ, subdepressâ, inæquilaterali, liris subdistantibus, regularibus concentricè rugatâ; intùs purpureâ, subtus umbones triradiatâ; apice cæruleo; epidermide nitenti, subviridi; latere antico breviùsculo, cæruleo, uniradiato; latere postico paulò producto, subattenuato, ad terminum subtruncato.*

THE SUN-SET CYRENA. Shell ovate, slightly compressed, slightly depressed, inequilateral, concentrically wrinkled with rather distant, regular ridges; purple within, three-rayed under the umboes; apex blue; epidermis shining, greenish; anterior side rather short, with a single ray of blue; posterior side a little produced, rather attenuated, slightly truncated at the end.

BENSON. Deshayes, Cat. Mus. Brit.

Sikkim, Bundelkund.

The umbonal rays from which the name is derived are not always present in the specimens.

Species 49. (Mus. Hanley.)

CYRENA STRIATELLA. *Cyr. testâ subovatâ, subviridi, subcæruleâ, subinflatâ; distanter regulariter rugatâ; umbonibus moderatè elevatis; intùs purpureâ; latere antico breviùsculo, rotundo, uniradiato; latere postico producto, subtruncato; margine dorsali utrinque declivi.*

THE SMALL-STRIATED CYRENA. Shell subovate, greenish, rather blue, slightly inflated, distantly regularly wrinkled; umboes moderately raised, purple within; anterior side rather short, rounded, single-rayed; posterior side produced, slightly truncated; dorsal margin sloped on each side.

DESHAYES. Proc. Zool. Soc. 1854, p. 344.

Hab. Pondicherry.

Species 50. (Mus. Hanley.)

CYRENA BENGALENSIS. *Cyr. testâ parvâ, ovatâ, roseofulvâ, tenuiter liratâ, compressâ; latere antico angusto, subacuminato, breviùsculo; latere postico paulò magis producto; umbonibus moderatè declivibus.*

THE BENGAL CYRENA. Shell small, ovate, pinky-fulvous, finely ridged, compressed; anterior side narrow, rather acuminated; rather short; posterior side a little more produced; umboes moderately sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 344.

Hab. River Jumna.

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51b.

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57a.

57b.

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G.B. Sowerby del et Lith.

Vincent Brooks Day & Son Imp.

CYRENA.

PLATE XII.

Species 51. (Fig. *a*, *b*, Mus. Brit.)

CYRENA COR. *Cyr. testâ subtrigonâ, crassâ, tumidâ, altâ; aurantio-fuscâ, vel griseâ, purpureo-fasciatâ; tenuiter-sulcatâ; sulcis versus marginem magis numerosis, ad latera evanidis; latere antico brevi, supernè excavato; latere postico producto, angulato, margine dorsali declivi, margine terminali truncato; intùs albâ, medio purpureâ.*

THE HEART CYRENA. Shell subtrigonal, thick, tumid, high, orange-brown, or grey, banded with purple, finely grooved, grooves more numerous towards the margin, fading off at the sides; anterior side short, excavated above; posterior side produced, angular, dorsal margin sloped, terminal margin truncated, white within, purplish in the middle.

LAMARCK. Anim sans Vert.

Cyrena consobrina. Deshayes.

Hab. River Euphrates. (small var.)

Species 52. (Mus. Brit.)

CYRENA RHOMBOIDEA. *Cyr. testâ ovato-subtrigonâ, subdepressâ, supernè regulariter rugatâ, versus marginem lœviùsculâ, latere postico angulato, post angulum complanato, margine dorsali declivi, latere antico brevi; umbonibus elevatis, subacuminatis, margine ventrali rectiùsculo.*

THE RHOMBOIDAL CYRENA. Shell ovate, subtrigonal, subdepressed, regularly wrinkled above, rather smooth towards the margin, posterior side angular, flattened behind the angle, dorsal margin sloped; anterior side short; umboes raised, rather raised, slightly acuminated, ventral margin rather straight.

PRIME. Catalogue of Corbiculæ, 3, 1863.

Hab. Malacca.

Species 53. (Mus. Brit.)

CYRENA CUMINGII. *Cyr. testâ subovatâ, inflatâ, tenui, subaurantiâ, liris distantibus, acutis, hinc-illic concurrentibus rugatâ; latere antico brevi, subrotundo; latere postico producto, leviter angulato, ad terminum truncato, margine dorsali declivi.*

CUMING'S CYRENA. Shell rather oval, inflated, thin, rather orange, wrinkled with distant, sharp, here and there concurrent ridges; anterior side short, rather round; posterior side produced, slightly angular, truncated at the end; dorsal margin sloped.

DESHAYES.

Hab. Philippines.

Species 54. (F. *a*, *b*, Mus. Hanley.)

CYRENA ORIENTALIS. *Cyr. testâ solidâ, subtrigonâ, altâ, liris crassis, rotundis, rugatâ, epidermide nitenti, aurantio-olivaceâ, nigrescenti, indutâ, intùs purpureâ; latere antico breviùsculo, margine laterali dèclivi; latere postico angulato, valdè declivi, ad terminum truncato.*

THE ORIENTAL CYRENA. Shell solid, subtrigonal, high, wrinkled with thick, rounded ridges; covered with a shining orange-olive blackish epidermis, purple within, anterior side rather short, lateral margin sloped, posterior side angular, much sloped, truncated at the end.

LAMARCK.

Cyrena fluminalis. Müller.

Hab. India, (var. *f*, *b*), Japan.

Species 55. (Mus. Brit.)

CYRENA YOKOHAMENSIS. *Cyr. testâ ovatâ, solidâ, subdepressâ, subdistanter concentricè liratâ; epidermide nitenti, crassâ, nigrescenti indutâ, intùs purpureâ; latere antico brevissimo; latere postico angulato, obliquè truncato, subacuminato.*

THE YOKOHAMA CYRENA. Shell ovate, solid, rather depressed, rather distantly concentrically ridged; covered with a thick, shining, blackish epidermis, purple within; anterior side very short, posterior side angular, obliquely truncated, rather acuminated.

SOWERBY.

Hab. Yokohama, Japan.

Species 56. (Mus. Brit.)

CYRENA FLUMINEA. *Cyr. testâ subtrigonâ, altâ, ferè æquilaterali, latâ, epidermide subaurantiâ lævigatâ indutâ; liris distantibus validis rugatâ; umbonibus elevatis, subacuminatis, margine dorsali utrinque declivi; latere postico obscurè angulato, ad terminum truncato; dentibus lateralibus elongatis.*

THE RIVER CYRENA. Shell trigonal, high, nearly equilateral, broad, covered with a smooth, somewhat orange epidermis, wrinkled with distant, strong ridges; umboes raised, slightly acuminated, dorsal margin sloped on each side; posterior side with an obscure angle, truncated at the end; lateral teeth elongated.

LAMARCK. Anim sans Vert. V. VI. p. 274.

Hab. China, &c.

Species 57. (F. *a*, *b*, Mus. Hanley and Brit.)

CYRENA PUSILLA. *Cyr. testâ parvâ, ovatâ, albidâ, vel purpurascenti, vel fusco-flavidâ, subcompressâ, medio tumidâ, tenuissimè rugatâ; latere antico breviùsculo, latere postico magis producto, subtruncato.*

THE DWARF CYRENA. Shell small, oval, whitish or purple, or brownish-yellow, rather compressed, tumid in the middle, very finely wrinkled; anterior side rather short; posterior side more produced, slightly truncated.

PHILIPPI. ——? Mus. Brit.

Hab. Upper Nile, Syene.

Species 58. (Mus. Brit.)

CYRENA COMPRESSA. *Cyr. testâ subovatâ, compressâ, concentricè leviter rugatâ, ad latera lævigata, epidermide pallidâ indutâ; latere antico breviùsculo, rotundo; latere postico angulato, obliquè truncato, margine dorsali valdè declivi.*

THE FLATTENED CYRENA. Shell subovate, compressed, concentrically slightly wrinkled, smooth at the sides, covered with a pale epidermis, anterior side rather short, round, posterior side angular, obliquely truncated, dorsal margin much sloped.

MOUSSON. Deshayes, B. M. Cat. 1854.

Hab. Java.

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48 b.

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C. B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

CYRENA.

PLATE XIII.

Species 59. (Mus. Brit.)

CYRENA AFRICANA. *Cyr. testâ subcompressâ, subtrigonâ, fuscâ, tenuiter concentricè rugatâ; intùs sordidè violaceâ, dentibus lateralibus æqualibus; apice elevato, margine dorsali utrinque declivi; margine postico laterali subtruncato; sulcis versus marginem subevanidis.*

THE AFRICAN CYRENA. Shell rather compressed, somewhat trigonal, brown, finely concentrically wrinkled, dull violet within; lateral teeth equal; apex raised, dorsal margin sloped downwards on each side, posterior lateral margin somewhat truncated; wrinkles dying out towards the margin.

KRAUSS. Süd-Afrikanischen Mollusken, p. 8, Tab. I. f. 8.

Cyrena Guaritziana. Krauss. in correspondence.

Hab. River Guaritz, South Africa.

Species 60. (Mus. Brit.—Hanley.)

CYRENA CASHMIRIENSIS. *Cyr. testâ compressâ, altâ, subtrigonâ, regulariter, profundè, et densè concentricè liratâ, epidermide fusco-nigricanti indutâ; intùs densè violaceâ, vel albâ; umbonibus rotundis, elevatis, margine dorsali utrinque declivi, margine postico-laterali subtruncato; margine ventrali rotundo; sulcis ad latera evanidis.*

THE CASHMERE CYRENA. Shell compressed, raised, subtrigonal, regularly, deeply, and closely concentrically ridged, covered with a blackish-brown epidermis, deeply violet or white within; umboes rounded, raised, dorsal margin sloped on each side, postero-lateral margin rather truncated, ventral margin rounded; grooves disappearing at the sides.

DESHAYES, PRIME. Pro. Ac. Nat. Sci. Phil. 1854.

Hab. Cashmere.

M. Hanley has a single valve of this shell densely purple within; while the specimens in the British Museum are pure chalky white.

Species 61. (Mus. Sowerby.)

CYRENA LARGILLIERTI. *Cyr. testâ subtrigonâ, tumidâ, epidermide stramineo-olivaceâ indutâ, anticè subirregulariter rugatâ, posticè lævigatâ; intùs prope marginem purpureo-fasciato; umbonibus tumidis, purpureo triradiatis, elevatis; margine dorsali utrinque declivi, margine ventrali rotundo; latere postico truncato, subangulato.*

LARGILLIERT'S CYRENA. Shell trigonal, tumid, covered with an olive-straw epidermis, anteriorly somewhat irregularly wrinkled, posteriorly rather more smooth; banded with purple inside near the margin; umboes tumid, three-rayed with purple, raised; ventral margin rounded; posterior side truncated, slightly angular.

PHILIPPI. Zeitschrift für Malak. 1844.

Hab. China.

Species 62. (Mus. Sowerby.)

CYRENA SUMATRENSIS. *Cyr. testâ subovatâ, tumidâ, concentricè irregulariter rugatâ, epidermide olivaceo-fuscâ, subfoliaceâ indutâ; intùs albâ, medio pallidissimè aurantiâ, dente cardinali antico brevissimo, postico magis remoto; latere antico brevi, margine dorsali declivi; latere postico magis producto, margine dorsali elevato; umbonibus obtusissimis, depressis.*

THE SUMATRA CYRENA. Shell subovate, tumid, concentrically irregularly wrinkled, covered with an olive-brown slightly leafy epidermis; white within, very pale orange in the middle; anterior cardinal tooth very short, posterior more remote; anterior side short, dorsal margin sloped; posterior side more produced, dorsal margin raised; umboes very obtuse, depressed.

SOWERBY. Genera of Shells. No. 2.

Cyrena Saigonensis. —— ?

Hab. Sumatra.—Saigon, China.

Species 63. (Mus. Brit.)

CYRENA WOODIANA. *Cyr. testâ subovatâ, altâ, obliquâ, epidermide crasso, nitenti, olivaceo-nigricanti, aurantio-fasciatâ indutâ, medio distanter rugatâ; latere antico brevissimo, margine dorso-laterali valdè declivi; umbonibus elevatis, margine ventrali valdè convexo; latere postico producto, angulato, subacuminato, margine ventrali sursùm acclivi, margine dorsali longè declivi.*

WOOD'S CYRENA. Shell subovate, high, oblique, covered with a thick, shining, blackish-olive epidermis, banded with orange, distantly wrinkled in the middle; anterior side very short, dorso-lateral margin much sloped; umboes raised, ventral margin very convex; posterior side produced, angular, slightly acuminated, ventral margin sloped upwards, dorsal margin with a long slope.

LEA. Trans. Amer. Phil. Soc. 1832.

Cyrena Primeana. Mörch.

Hab. China.

Cyrena similis, Gray, and *Cyrena grandis*, Deshayes, both resemble this species, which, however, is much more oval and higher than either. The first-named is a more triangular shell with a radiated angle, while the second holds a middle station between the other two.

Species 64. (Mus. Brit.)

CYRENA SIMILIS. *Cyr. testâ ponderosâ, subtrigonâ, tumidâ, irregulariter rugatâ, epidermide ferrugineâ, striatâ indutâ; latere antico brevi, latere dorsali declivi; latere postico producto, acuminato, subrostrato, angulato, margine laterali longè declivi.*

THE SIMILAR CYRENA. Shell ponderous, subtrigonal, tumid, irregularly wrinkled, covered with a ferruginous, striated epidermis; anterior side short, dorsal margin sloped downwards; posterior side produced, acuminated, somewhat beaked, angular; dorsal margin with a long slope.

GRAY. Griffith's Cuvier. 1834.

Hab. Philippines.

See remark on the preceding species.

Fig. 47, *c*. (Mus. Hanley.)

CYRENA RADIATA. Young. See Plate XI. for species.

Fig. 48, *b*. (Mus. Brit.)

CYRENA OCCIDENS var. See Plate XI. for species.

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G. B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

CYRENA.

PLATE XIV.

Species 65. (Mus. Brit.)

CYRENA RIVALIS. *Cyr. testâ subtrigonâ, solidâ, altâ, regulariter liris approximatis ad latera evanidis concentricè rugatâ; epidermide densè olivaceo-nigricanti indutâ; latere antico rotundato, infra umbones excavato; latere postico angulato, obliquè truncato; umbonibus prominentibus, subroseis.*

THE RIVER CYRENA. Shell subtrigonal, solid, high, regularly concentrically wrinkled with approximate ridges, obsolete at the sides; covered with a dark blackish-olive epidermis; anterior side rounded, excavated near the umboes; posterior side angular, obliquely truncated; umboes prominent, rather pink.

VON BUSCH. Phil. Abild. III. 110, Pl. 3. 1849.

Hab. Java.

Species 66. (Mus. Sowerby.)

CYRENA CONCINNA. *Cyr. testâ griseâ, fuscâ, tumidissimâ, subtrigonâ, solidâ, altâ, liris crebris, profundis, ad latera continuis rugatâ, intùs pallidè violaceâ, ad latera purpureo biradiatâ; latere antico brevi, tumidissimo, infra umbones excavato; latere postico producto, subacuminato, angulato, ad terminum subtruncato, subrostrato.*

THE NEAT CYRENA. Shell greyish-brown, very tumid, subtrigonal, solid, high, wrinkled with close, deep ribs continued at the sides, pale violet within, with a purple ray at each side; anterior side short, very tumid, excavated at the umboes; posterior side produced, slightly acuminated, angular, subtruncated, and beaked at the end.

SOWERBY.

Hab. —— ?

I have seen only one specimen of this species. Its locality is unknown.

Species 67. (Mus. Hanley.)

CYRENA GRACILIS. *Cyr. testâ tumidâ, depressâ, ovatâ, tenui, liris irregularibus, majùsculis, distantibus, concentricis, ad latera obsoletis, rugatâ, epidermide aurantio-subviridi indutâ, intùs ad marginem cardinalem purpureâ, versus marginem flavidâ; latere postico producto, vix truncato, subacuminato, latere antico rotundo, infra umbones excavato; umbonibus roseis, obtusis.*

THE SLENDER CYRENA. Shell tumid, depressed, ovate, thin, wrinkled with irregular, rather large, distant, concentric ridges, obsolete at the sides, covered with a greenish-orange epidermis, inside purple at the hinge margin, yellowish towards the margin; posterior side produced, scarcely truncated, subacuminated, anterior side rounded, excavated beneath the umboes; umboes pinkish, obtuse.

PRIME. American Journal of Conchology, X. 389. 1862.

Hab. Java.

Species 68. (Mus. Brit.)

CYRENA BULLATA. *Cyr. testâ altâ, tumidissimâ, brevi-ùsculâ, epidermide rugosâ, tenuiter striatâ fumoso-fuscâ indutâ; latere antico brevi, subrotundo; latere postico magis producto, obtusè angulato, margine dorsali declivi; umbonibus ovatis, obtusissimis; margine ventrali convexo.*

THE BULLATED CYRENA. Shell high, very tumid, rather short, covered with a rough, finely striated smoky-brown epidermis; anterior side short, rather round; posterior side more produced, obtusely angular; dorsal margin sloped; umboes oval, very obtuse; ventral margin convex.

SOWERBY.

Cyrena insignis. Deshayes.

Hab. California.

Having already figured a species of Cyrena (*Batissa*) under the name of *insignis, Deshayes*, we cannot repeat the name in a second division of what we regard as the same genus.

Species 69. (Mus. Brit.)

CYRENA CYRENIFORMIS. *Cyr. testâ crassâ, altissimâ, subtrigonâ, tumidâ, subobliquâ, distanter rugatâ,*

epidermide lævigatâ fusco-subviridi, intùs violaceâ; latere postico obliquè producto, angulato, versus marginem lævigato; latere antico brevi, declivi, infra umbones areâ lævigatâ lunulato; umbonibus productis.

THE CYRENIFORM CYRENA. Shell thick, very high, subtrigonal, tumid, rather oblique, distantly wrinkled, covered with a smooth, greenish-brown epidermis, violet within; posterior side obliquely produced, angular, smooth towards the margin; anterior side short, sloped, with a smooth lunular area; umboes produced.

PRIME —— ? (Corbicula) MS. Brit. Mus.

Hab. —— ?

It would be better to avoid giving such specific names to species of very closely allied genera as cannot with propriety be used when the genera are considered as one. Such tautologies as the '*Cyrena-shaped Cyrena*' would not then occur.

Species 70. (Mus. Hanley.)

CYRENA SULCATINA. *Cyr. testâ subtrigonâ, roseo-purpureâ, altâ, tenuissimè sulcatâ striatâ, posticè et ad latera lævisculâ, epidermide stramineâ indutâ, intùs purpureo marginatâ; umbonibus elevatis, margine dorsali utrinque declivi, infra umbones areâ pallidâ, planulatâ; anticè subexcavatâ; margine ventrali convexo.*

THE FINE-GROOVED CYRENA. Shell subtrigonal, purplish-pink, high, very finely groove-striated, posteriorly and at the sides rather smooth, covered with a straw-coloured epidermis, purple-bordered within; umboes elevated, dorsal margin sloped on each side with a pale, flattened area, slightly excavated anteriorly; ventral margin convex.

DESHAYES. Proc. Zool. Soc. London. 1864.

Hab. China.

Species 71. (Mus. Brit.)

CYRENA GRANDIS. *Cyr. testâ magnâ, ovato-subtrigonâ, irregulariter rugatâ, subcompressâ, intùs et ad umbones roseo-aurantiâ; latere antico brevi; latere postico acuminato, angulato; margine ventrali valdè convexo; margine dorsali utrinque declivi.*

THE LARGE CYRENA. Shell large, ovate-subtrigonal, irregularly wrinkled, compressed within and at the umboes pinky orange; anterior side short; posterior side acuminated, angular; ventral margin convex; dorsal margin sloped on each side.

DESHAYES —— ? MS. Brit. Mus.

Hab. —— ?

About half way in character between *C. Woodwardiana* and the more beaked and acuminated *C. similis*.

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G. B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

CYRENA.

PLATE XV.

Species 72. (Mus. Brit.)

CYRENA CRASSULA. *Cyr. testâ altissimâ, subtrigonâ, angustatâ, subarcuatâ, tenuiter liratâ, crassâ, epidermide olivaceâ indutâ, ad apicem intùsque cæruleâ, violaceâ; latere postico arcuato, prope marginem lateralem angulato; latere antico subexcavato; umbonibus incurvatis ferè lateraliter terminalibus.*

THE THICK CYRENA. Shell very high, subtrigonal, narrow, rather arched, finely ridged, thick, covered with an olive epidermis; bluish at the tip and inside; posterior side arched, angular near the margin; anterior side somewhat excavated; umboes curved inwards, almost terminal at the side.

MOUSSON —— ? MS. in Brit. Mus.

Hab. Lebanon.

Species 73. (Mus. Brit.)

CYRENA AMBIGUA. *Cyr. testâ subtrigonâ, subæquilaterali, olivaceo-nigricanti, moderatè tumidâ, tenuiter liratâ; latere antico declivi, subrotundo; latere postico declivi, obscurè biangulato.*

THE AMBIGUOUS CYRENA. Shell subtrigonal, blackish-olive, moderately tumid, finely ridged; anterior side sloped downwards, rather round; posterior side sloped downwards, with two obscure angles.

DESHAYES. Proc. Zool. Soc. London. XXII. p. 345.

Hab. River Euphrates.

Species 74. (Mus. Sowerby.)

CYRENA MANILLENSIS. *Cyr. testâ crassâ, subrhomboideâ, distanter liratâ, versus umbones griseâ, versus marginem subaurantiâ, intùs albâ cærulescenti, epidermide nitenti indutâ; latere antico brevi, margine dorsali declivi, laterali brevi, truncato; latere postico producto, margine dorsali declivi, terminali truncato; umbonibus rotundis.*

THE MANILLA CYRENA. Shell thick, rather rhomboidal, distantly grooved, grey towards the umboes, somewhat orange, bluish-white within, covered with a shining epidermis; anterior side short, dorsal margin sloped, lateral short, truncated; posterior side produced, dorsal margin sloped, terminal, truncated; umboes round.

PHILIPPI. Abild. Zeit. f. Malak. 1841.

Hab. Manilla.

Species 75. (Mus. Brit.)

CYRENA NEPEANENSIS. *Cyr. testâ subrhomboidea, fuscâ vel aurantiâ, rectâ, lævigatâ, compressâ; latere antico breviùsculo; latere postico magis producto, latè truncato; apice parvo, subacuminato, margine dorsali utrinque leviter declivi; margine ventrali rectiùsculo.*

THE NEPEAN CYRENA. Shell rather rhomboidal, brown or orange, straight, smooth, compressed; anterior side rather short; posterior side more produced, broadly truncated; apex small, somewhat acuminated; dorsal margin slightly sloped on each side; ventral margin rather straight.

LESSON —— ? MS. Brit. Mus.

Hab. River Nepea.

Species 76. (Mus. Brit.)

CYRENA REGULARIS. *Cyr. testâ pallidâ, subovatâ, subdepressâ, regulariter crebrè liratâ; latere antico breviùsculo, subacuminato, infra umbones excavato; latere postico latè truncato, margine dorsali declivi; umbonibus obtusis, depressis.*

THE REGULAR CYRENA. Shell pale, rather oval, rather depressed, regularly, closely ridged; anterior side rather short, slightly acuminated, excavated below the umboes; posterior side broadly truncated, dorsal margin sloped; umboes obtuse, depressed.

PRIME —— ? MS. Brit. Mus.

Hab. —— ?

Species 77. (Mus. Brit.)

CYRENA OVALINA. *Cyr. testâ ovatâ, tumidâ, epidermide nitenti, nigrescenti indutâ, rugis distantibus, supe-*

rioribus validis, continuis, versus marginem ventralem evanidis, posticè obsoletis indutâ; latere antico breviùsculo, rotundo; latere postico producto, latè truncato; umbonibus obtusissimis, margine dorsali utrinque lævigato, margine ventrali æqualiter convexo.

THE OVAL CYRENA. Shell ovate, tumid, covered with a shining, blackish epidermis dying out towards the ventral margin, posteriorly obsolete; anterior side rather short, rounded; posterior side produced, broadly truncated; umboes very obtuse, dorsal margin smooth on each side, ventral margin equally convex.

DESHAYES. Proc. Zool. Soc. 1854, p. 343.

Hab. Port Essington, Australia.

Species 78. (Mus. Brit.)

CYRENA MAXIMA. *Cyr. testâ subtrigonâ, altissimâ, subcompressâ, lævi, rugis paucis, distantibus, posticè evanidis irregulariter cinctâ; epidermide flavido-subaurantiâ indutâ; latere antico brevi, areâ lunulari convexâ; latere postico producto, infra medium acuminato, margine dorsali longè declivi, convexo; umbonibus elevatis; margine ventrali prominenter convexo.*

THE VERY LARGE CYRENA. Shell rather trigonal, very high, rather compressed, smooth, irregularly belted with few, distant wrinkles disappearing posteriorly, covered with a yellowish-orange epidermis; anterior side short, lunular area convex; posterior side produced, acuminated below the middle, dorsal margin with a long slope, convex; umboes raised; ventral margin prominently convex.

DESHAYES. Proc. Zool. Soc. 1860, p. 321.

Hab. —— ?

Species 79. (Mus. Brit.)

CYRENA BRAZILIANA. *Cyr. testâ altâ, tenuissimè liratâ, subrotundâ, intùs albâ; latere antico rotundo, brevi; latere postico obliquè producto, margine dorsali longè declivi; epidermide aurantio-stramineâ, castaneo angustè fasciatâ, umbonibus elevatis, versus laterem anticum declinatis.*

THE BRAZILIAN CYRENA. Shell high, very finely grooved, rather rounded; white within, anterior side rounded, short; posterior side obliquely produced, dorsal margin with a long slope; epidermis orange-straw, with narrow bands of chestnut; umboes raised, turned towards the anterior side.

DESHAYES. Cat. Brit. Mus. 1854.

Hab. Brazil.

Species 80. (Mus. Brit.)

CYRENA TENUISTRIATA. *Cyr. testâ subtrigonâ, altâ, pallidè fulvâ, ferè lævigatâ, compressâ, obscurè tenuissimè striatâ; latere antico brevi, usque ad marginem ventralem declivi, margine ventrali rotundo, producto, latere postico declivi, producto, infra medium subacuminato, margine ventrali sursùm acclivi; umbonibus elevatis.*

THE FINE-STRIATED CYRENA. Shell subtrigonal, high, pale fulvous, almost smooth, compressed, obscurely, very finely striated; anterior side short, sloped down to the ventral margin; ventral margin round, produced, posterior side sloped downwards, produced, slightly acuminated below the middle, ventral margin sloped upwards; umboes elevated.

PRIME. Proc. Zool. Soc. 1860, p. 323.

Hab. —— ?

Species 81. (Mus. Brit.)

CYRENA PARACENSIS. *Cyr. testâ altissimâ, augustâ, liris irregularibus posticè evanidis rugatâ, obscurè olivaceâ, intùs purpureâ; latere antico brevissimo, margine laterali rectiùsculo; latere postico, margine dorsali breviter declivi, margine laterali obliquè declivi; margine ventrali subconvexo.*

THE PARACA CYRENA. Shell very elevated, narrow, wrinkled with irregular ridges, posteriorly fading, obscurely olivaceous, purple within; anterior side very short, lateral margin rather straight; posterior side, dorsal margin shortly sloped, lateral margin obliquely sloped; ventral margin rather convex.

D'ORBIGNY —— ? MS. Brit. Mus.

Hab. Paraca.

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82.b

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87.b.

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C.B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp.

CYRENA.

PLATE XVI.

Species 82. (Fig. *a*, *b*, Mus. Brit.)

CYRENA AUSTRALIS. *Cyr. testâ ovato-subtrigonâ, depressâ, compressâ, pallidissimè fumoso-fulvâ, vel fuscâ, vel aurantiâ, irregulariter et leviter rugatâ; latere antico brevi, margine latero-dorsali declivi, lævigatâ; latere postico producto, infra medium acuminato, margine dorso-laterali convexiùsculo, declivi, lævigato.*

THE AUSTRALIAN CYRENA. Shell ovate-subtrigonal, depressed, compressed, very pale smoky-fulvous, or brown, or orange, irregularly and slightly wrinkled; anterior side short, latero-dorsal margin sloped, smooth; posterior side produced, acuminated below the middle, dorso-lateral margin rather convex, sloped, smooth.

DESHAYES. Ed. Lamarck.

Hab. Isl. of Timor.

Species 83. (Mus. Brit.)

CYRENA LYDIGIANA. *Cyr. testâ tumidâ, subrotundâ, altitudine latitudinem æquanti, æquilaterali, regulariter subæqualiter et subdistanter rugatâ, infrà griseo-subviridi, suprà nigricanti, castaneo radiatâ, intùs densè violaceâ; umbonibus rotundis, elevatis, margine dorsali utrinque declivi; latere postico infra medium subacuminato.*

THE LYDIG CYRENA. Shell tumid, rather rounded, the height equalling the breadth, equilateral, regularly rather equally and distantly wrinkled, greyish-green below, blackish above, rayed with chestnut, deep purple within; umboes rounded, raised, dorsal margin sloped on each side; posterior side rather acuminated below the middle.

PRINCE. Cal. Corb. 3. 1863.

Hab. Siam.

Species 84. (Mus. Brit.)

CYRENA SEMISULCATA. *Cyr. testâ oblongâ, depressâ, ferè lævigatâ, leviter partim rugatâ, obscurè fulvâ, cæruleo-fasciatâ, intùs densè purpureâ; latere antico brevissimo, infra umbones subexcavato, margine dorsali valdè declivi; latere postico producto, oblongo, margine dorsali leviter declivi, margine laterali latè truncato.*

THE HALF-GROOVED CYRENA. Shell oblong, depressed, almost smooth, slightly wrinkled in parts, dull fulvous, banded with blue, deep purple within; anterior side very short, slightly hollow under the umboes, dorsal margin much sloped; posterior side produced, oblong, dorsal margin slightly sloped, lateral margin broadly truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. Pondicherry.

Species 85. (Mus. Brit.)

CYRENA OBSOLETA. *Cyr. testâ obliquè trigonâ, altâ, tenuissimè striatâ, compressâ, supernè subviridi, medio rufo-fuscâ, intùs purpureâ; latere antico brevi, valdè declivi; umbonibus elevatis, subacuminatis, margine ventrali convexo; latere postico producto, declivi, infra medium acuminato.*

THE OBSOLETE CYRENA. Shell obliquely trigonal, high, very finely striated, compressed, greenish above, reddish-brown in the middle, purple within; anterior side short, much sloped; posterior side produced; umboes raised, somewhat acuminated, ventral margin convex; posterior side produced, sloped, acuminated below the middle.

DESHAYES. Proc. Zool. Soc. 1854, p. 343.

Hab. —— ?

Species 86. (Mus. Brit.)

CYRENA INCRASSATA. *Cyr. testâ subovatâ, depressâ, crassâ, subcompressâ, densè fusco-subviridi, tenuissimè striatâ, ferè lævigatâ, anticè distanter tenuiter rugatâ; latere antico brevissimo, infra umbones excavato; umbonibus anticè inclinatis, depressis; latere postico producto, acuminato, margine arcuatim declivi.*

THE THICKENED CYRENA. Shell rather oval, depressed, thick, slightly compressed, dark greenish-brown, very finely striated, almost smooth, with distant slender wrinkles; anterior side very short, hol-

low under the umboes; umboes leaning to the front, depressed; posterior side produced, acuminated, margin sloped in an arch.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. —— ?

Species 87. (Fig. *a*, *b*, Mus. Brit.)

CYRENA VARIEGATA. *Cyr. testâ altâ, subrotundâ, tenui, subviridi et nigrâ, vel subaurantiâ, nebulis radiisque variegatâ, tenuissimè striatâ, vix rugatâ, latere postico producto, rotundo, latere antico brevissimo.*

THE VARIEGATED CYRENA. Shell high, rather rounded, thin, greenish or black, or rather orange, variegated with clouds and rays of purple, very finely striated, scarcely wrinkled, posterior side produced, rounded, anterior side very short.

DESHAYES. MS. Mus. Cuming.

Hab. La Plata.

Species 88. (Mus. Sowerby.)

CYRENA MALLACENSIS. *Cyr. testâ tenui, subrhomboïdeâ, fumoso olivaceâ, nitenti, regulariter, distanter, acutè rugatâ, intùs albâ; latere antico brevi, declivi; latere postico producto, obliquè truncato.*

THE MALACCA CYRENA. Shell thin, subrhomboidal, smoky-olive, shining, regularly, distantly, sharply wrinkled, white within; anterior side short, sloped; posterior side produced, obliquely truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 343.

Hab. Malacca.

Species 89. (Mus. Hanley.)

CYRENA NITENS. *Cyr. testâ subaurantiâ, nitenti, compressâ, subdepressâ, obliquè trigonâ, tenuiter sulcatâ, intùs et ad umbones subroseâ; latere antico brevi, rectiùsculo, valdè declivi; latere postico obliquè producto, margine dorsali longè declivi, ad marginem ventralem acuminato; margine ventrali rectiùsculo.*

THE SHINING CYRENA. Shell rather orange, shining, compressed, rather depressed, obliquely trigonal, finely grooved, rather pink at the umboes; anterior side short, rather straight, much sloped; posterior side obliquely produced, dorsal margin with a long slope, acuminated at the ventral margin; ventral margin rather straight.

DESHAYES. MS. Cum. Coll.

Hab. —— ?

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G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

CYRENA.

PLATE XVII.

Species 90. (Mus. Hanley.)

CYRENA ANGASI. *Cyr. testâ ovato-oblongâ, subrhomboideâ, tenui, depressâ, subcompressâ, intùs et ad apicem subroseâ vel cinereâ, epidermide flavidâ tenui indutâ; latere antico brevi, angustè subtruncato; latere postico producto, obtusè angulato, latè truncato.*

ANGAS'S CYRENA. Shell ovate-oblong, somewhat rhomboidal, thin, depressed, rather compressed, pinky or ashy within and at the apex, covered with a thin yellowish epidermis; anterior side short, narrowly subtruncated; posterior side produced, obtusely angular, broadly truncated.

PRIME. Cat. Corb. 1863, p. 4.

Hab. Murray River, South Australia.

Species 91. (Mus. Hanley.)

CYRENA JAPONICA. *Cyr. testâ altâ, trigonâ, compressâ, subsolidâ, nitenti, fumoso-castaneâ, sulcis partim obsoletis rugatâ; intùs versus apicem purpureo strigatâ, ad latera marginemque cæruleâ; latere antico valdè declivi, breviori, latere postico obtusè angulato, obliquè truncato, supernè declivi.*

THE JAPAN CYRENA. Shell high, trigonal, compressed, rather solid, shining, smoky chestnut, wrinkled with partly obsolete grooves, striped with purple inside towards the apex, bluish at the sides and edge; anterior side much sloped, shorter; posterior side obtusely angular, obliquely truncated, supernè declivi.

PRIME. Ann. Lyc. New York, 1864.

Hab. Japan.

A beautiful little shell, having much the aspect of a young *Cytherea*.

Species 92. (Mus. Hanley.)

CYRENA TUMIDA. *Cyr. testâ subtrigonâ, altâ, tenui, subæquilaterali, tumidâ, irregulariter distanter rugatâ, ad latera purpureo-fuscatâ, epidermide aurantiâ indutâ, intùs et ad apicem densè purpureâ; latere postico longiùsculo, obtusissimè angulato.*

THE TUMID CYRENA. Shell trigonal, high, thin, somewhat equilateral, tumid, irregularly distantly wrinkled, purple-brown at the sides, covered with an orange-brown epidermis, deep purple within and at the apex; posterior side rather long, very obtusely angular.

DESHAYES. Proc. Zool. 1854, p. 343.

Hab. Borneo.

Species 93. (Mus. Hanley.)

CYRENA ARATA. *Cyr. testâ ovatâ, tenuissimâ, rosaceâ, tumidissimâ, liris magnis, distantibus ad latera subobliquè terminantibus rugatâ, epidermide aurantio-flavidâ indutâ; latere antico rotundo, valdè inflato; latere postico magis producto, subattenuato, angustè truncato.*

THE PLOUGHED CYRENA. Shell ovate, very thin, pinky, very tumid, wrinkled with large, distant ridges, terminating rather obliquely at the sides, covered with an orange-yellow epidermis; anterior side rounded, much inflated; posterior side more produced, slightly attenuated, narrowly truncated.

BLANFORD. —— ? MS. Hanley Coll.

Hab. Tenasserim.

Species 94. (Mus. Hanley.)

CYRENA PROLONGATA. *Cyr. testâ ovato-subtrigonâ, depressâ, elongatâ, compressâ, tenuissimè liratâ, epidermide tenui, stramineâ, indutâ, intùs subcæruleo, albâ; latere antico brevi, declivi, latere postico attenuato, subacuminato.*

THE LENGTHENED CYRENA. Shell ovate-subtrigonal, depressed, elongated, compressed, very finely ridged, covered with a thin straw-coloured epidermis, bluish white within; anterior side short, sloped; posterior side attenuated, subacuminated.

PRIME. —— ? MS. Hanley's Collection.

Hab. Wide Bay, Australia.

Species 95. (Mus. Hanley.)

CYRENA MÜLLERIANA. *Cyr. testâ subrotundâ, altissimâ, tumidâ, intùs extùsque densè purpureâ, epidermide subviridi, nitenti indutâ, liris validis distantibus, nonnullis concurrentibus rugatâ; umbonibus ferè centralibus, elevatis, margine dorsali utrinque declivi.*

MÜLLER'S CYRENA. Shell rather round, very high, tumid, deep purple within and without, covered with a greenish shining epidermis, wrinkled with strong, distant ridges, some of them running into each other; umboes nearly central, raised, dorsal margin sloped downwards on each side.

PRIME. —— ? MS. Hanley's Collection.

Hab. Fuh Chan, China.

Species 96. (Mus. Hanley.)

CYRENA LIMOSA. *Cyr. testâ altâ, ovato-subrotundâ, compressâ, tenuiter liratâ, ferè æquilaterali, intùs extùsque pupureâ, epidermide subviridi vel nigricanti indutâ; latere antico quam posticum breviori, margine dorsali convexo-declivi; latere postico subrotundo, margine dorsali paulò elevato; umbonibus versus latus anticum inclinatis, margine ventrali convexo.*

THE MUDDY CYRENA. Shell high, ovate-subrotund, compressed, finely ridged, almost equilateral, purple inside and out, covered with a greenish or blackish epidermis; anterior side shorter than posterior, with dorsal margin convexly sloped; posterior side rather rounded, dorsal margin a little raised; umboes leaning towards the anterior side, ventral margin convex.

MATON. Hanley, in Photographic Illustrations.

Hab. La Plata.

Species 97. (Mus. Brit.)

CYRENA MOUSSONIANA. *Cyr. testâ ovatâ, subcompressâ, tenuiùsculâ, medio liratâ, ad latera lævigatâ, epidermide densè olivaceâ vel flavidâ indutâ, intùs albâ; latere antico brevi, rotundo; latere postico producto; margine dorsali rectiùsculo, paulò declivi, margine laterali latè truncato.*

MOUSSON'S CYRENA. Shell ovate, rather compressed, rather thin, ridged in the middle, smooth at the sides, covered with a dark olive or rather yellow epidermis, white within; anterior side short, round, posterior side produced; dorsal margin rather straight, a little sloped, lateral margin broadly truncated.

DESHAYES. —— ? MS. Brit. Mus.

Hab. —— ?

Species 98. (Mus. Brit.)

CYRENA FRAGILIS. *Cyr. testâ oblongâ, tenuissimâ, densè subviridi, liris distantibus subobliquis, posticè evanidis, nonnullis concurrentibus rugatâ, intùs albâ; latere antico brevi, infra umbones excavato; latere postico oblongo, margine dorsali leviter declivi, margine terminali latè, obliquè truncato.*

THE FRAGILE CYRENA. Shell oblong, very thin, deep greenish, wrinkled with distant, rather oblique ridges disappearing posteriorly, some running into each other, white within; anterior side short, hollowed beneath the umboes; posterior side oblong, dorsal margin slightly sloped, terminal margin broadly, obliquely truncated.

DESHAYES. —— ? MS. Brit. Mus.

Hab. —— ?

Species 99. (Mus. Brit.)

CYRENA SQUALIDA. *Cyr. testâ tenui, oblongâ, depressâ, compressâ, epidermide sordidè olivaceâ, violaceo-nebulatâ indutâ, ad latera lævigatâ, medio irregulariter rugatâ; latere antico brevi, rotundo, infrà umbones excavato, latere postico producto; margine dorsali declivi, margine laterali obliquè truncato, infrà subacuminato.*

THE SQUALID CYRENA. Shell thin, oblong, depressed, compressed, covered with a dirty olive epidermis clouded with violet, smooth at the sides, irregularly wrinkled in the middle; anterior side short, rounded, hollowed under the umboes; posterior side produced, dorsal margin sloped, lateral margin obliquely truncated, slightly acuminated below.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. —— ?

Species 100. (Mus. Brit.)

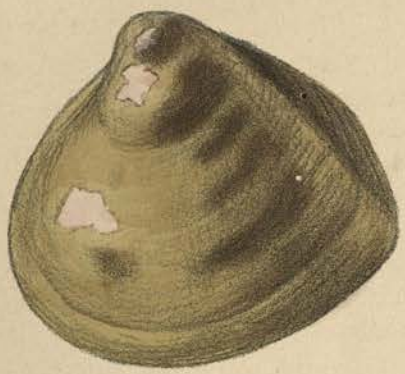
CYRENA SALMACIDÆ. *Cyr. testâ donaciformi, tenui, lævigatâ, albidâ, purpureo-nebulatâ; latere antico alto, brevissimo, umbonibus acutis, margine dorsali valdè declivi, latere postico producto, acuminato.*

THE SALMACIDIAN (?) CYRENA. Shell donax-shaped, thin, smooth, whitish, clouded with purple; anterior side high, very short; umboes acute, dorsal margin much sloped, posterior side produced, acuminated.

MORELET —— ? MS. Brit. Mus.

Hab. —— ?

101



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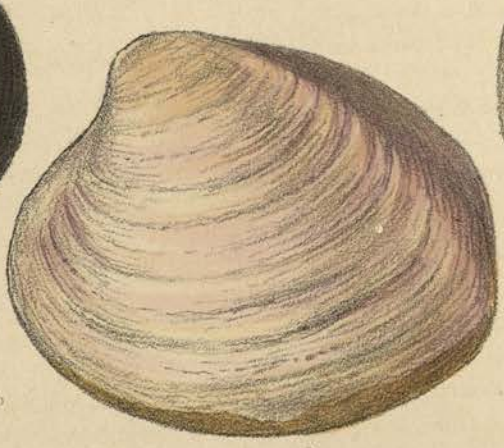

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G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp.

CYRENA.

PLATE XVIII.

Species 101. (Mus. Brit.)

CYRENA OVALIS. *Cyr. testâ tenui, ovatâ, subæquilaterali, regulariter, densè liratâ, epidermide olivaceo-nigricanti, nitenti indutâ, intùs purpureâ; latere antico breviùsculo, rotundo; latere postico latè subtruncato; umbonibus elevatis, purpureo perpendiculariter fasciatis.*

THE OVAL CYRENA. Shell thin, ovate, subequilateral, regularly and very closely ridged, covered with an olive-blackish, shiny epidermis, purple within; anterior side the shorter, rounded; posterior side broadly subtruncated; umboes raised, perpendicularly banded with purple.

PRIME. Journal de Conchyliologie, Pl. 2, f. 6.

Hab. ——?

The ridges in this corbicula are more fine, close, and continuous than either of the two similarly shaped species.

Species 102. (Mus. Brit.)

CYRENA FLORIDANA. *Cyr. testâ brevi, altâ, crassâ, tumidissimâ, inæquilateraliter subtrigonâ, lævigatâ, subtus epidermidem roseâ, intùs carneâ, epidermide flavido-fulvâ, castaneo maculatâ; latere postico declivi angulato, ad angulum ferè carinato, infrà acuminato; umbonibus tumidis, elevatis; latere antico brevi, declivi.*

THE FLORIDA CYRENA. Shell short, high, thick, very tumid, inequilaterally trigonal, smooth, pinky under the epidermis, flesh-coloured within; epidermis yellowish fawn, spotted with chestnut; posterior side sloped, almost keeled at the angle, acuminated below; umboes tumid, raised; anterior side short, sloped.

CONRAD. Freshwater Shells of United States.

Hab. Florida.

Species 103. (Mus. Brit.)

CYRENA ISOCARDIOIDES. *Cyr. testâ brevi, altissimâ, tenui, tumidissimâ, supernè subtrigonâ, epidermide lævigatâ, tenui, corneâ indutâ, intùs ad cardinem et subtus umbones purpureâ; latere antico brevissimo, subtus umbones excavato, versus medium valdè inflato; umbonibus subdistantibus, latere postico subrostrato, angulato, truncato, margine ventrali valdè convexo.*

THE ISOCARDIA-LIKE CYRENA. Shell short, very high, thin, very tumid, triangular at the upper part, covered with a smooth, thin, horny epidermis, purple inside at the hinge, and under the umboes; anterior side very short, excavated beneath the umboes; umboes a little distant, posterior side rather beaked, angular, truncated; ventral margin very convex.

DESHAYES ——? MS. Cum. Col.

Hab. ——?

Species 104. (Mus. Brit.)

CYRENA SOLIDA. *Cyr. testâ crassâ, magnâ, breviter subrhomboideâ, tumidissimâ, epidermide tenuissimâ indutâ, anticè leviter rugatâ; latere antico brevissimo, umbonibus ferè terminalibus; latere postico producto, obtusè angulato; margine latero-dorsali elongato, arcuato; margine ventrali convexo, versus angulum posticum sursùm acclivi.*

THE SOLID CYRENA. Shell thick, large, shortly subrhomboidal, very tumid, covered with a very thin epidermis, anteriorly lightly wrinkled; anterior side very short, umboes nearly terminal, posterior side produced, obtusely angular; dorsal margin lengthened, arched; ventral margin convex, sloped up towards the posterior angle.

DESHAYES ——? MS. Cum. Coll.

Hab. Australia.

Species 105. (Mus. Brit.)

CYRENA JUKESII. *Cyr. testâ ovatâ, compressâ, lævigatâ, epidermide fuscâ, crenulatim striatâ indutâ; latere antico brevi; latere postico producto, margine dorsali arcuatim declivi.*

JUKES'S CYRENA. Shell ovate, compressed, smooth, covered with a brown epidermis with crenulated striæ; anterior side short; posterior side produced, dorsal margin slightly arched, sloped downwards.

DESHAYES. Proc. Zool. Soc. 1854, p. 19.

Hab. Port Essington.

Species 106. (Mus. Brit.)

CYRENA PLACIDA. *Cyr. testâ ovato-rotundatâ, compressâ, altâ, lævigatâ, epidermide striatâ indutâ, ferè æquilaterali, intùs pallidè roseâ, lateribus rotundis, umbonibus depressis, obtusissimis.*

THE PLACID CYRENA. Shell ovately rounded, compressed, high, smooth, covered with a striated epidermis, almost equilateral, pale rose within, sides rounded; umboes depressed, very obtuse.

DESHAYES. Proc. Zool. Soc. 1854, p. 19.

Hab. ——? Cum. Coll.

Species 107. (Mus. Brit.)

CYRENA NOTABILIS. *Cyr. testâ subrhomboideâ, depressâ, subcompressâ, tenuiter striatâ, epidermide tenuissimâ indutâ; latere antico brevi, rotundo, infra umbones excavato; latere postico oblongo, angulato, post angulum extùs intùsque purpureo, margine dorsali paulò declivi, arcuato, margine terminali latè truncato.*

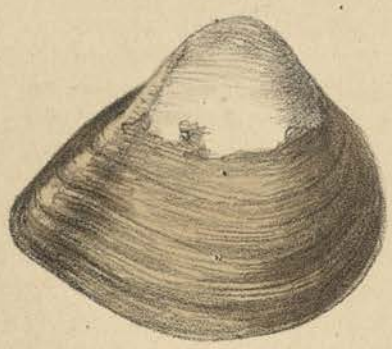
THE REMARKABLE CYRENA. Shell subrhomboidal, depressed, rather compressed; finely striated, covered with a very thin epidermis; anterior side short, rounded, excavated under the umboes; posterior side oblong, angular, purple within and without behind the angle, dorsal margin a little sloped, arched, terminal margin broadly truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 21.

Hab. Payta, Peru.

Having much the form of a *Cypricardia*.

108.



109.

110.

111

112.

114.

113.

G B Sowerby del et Lith

Vincent Brooks Day & Son Imp

CYRENA.

PLATE XIX.

Species 108. (Mus. Sowerby.)

CYRENA DONACIFORMIS. *Cyr. testâ parvâ, tenuissimè liratâ, trigonâ, valdè inæquilaterali; margine dorsali utrinque valdè declivi, areâ purpureâ, utrâque valvâ semilunatâ; latere antico breviùsculo, declivi, subacuminato, latere postico attenuatim producto, ad terminum acuminato.*

THE DONAX-SHAPED CYRENA. Shell small, very finely ridged, trigonal, very inequilateral; dorsal margin much sloped on each side, with a semilunar area of purple on each valve; anterior side rather short, sloped, rather acuminated, posterior side taperingly produced, acuminated at the end.

SOWERBY.

Hab. Florida.

This species belongs to the *Corbicula* group in the character of the hinge.

Species 109. (Mus. Brit.)

CYRENA ANOMALA. *Cyr. testâ tenuissimâ, inflatâ, altâ, subtrigonâ, epidermide tenui, pallidè subviridi indutâ, intùs ad cardinem et infra umbones purpureâ; latere antico inflatâ, rotundâ, brevi; umbonibus inflatis, rotundis, margine ventrali valdè convexo; latere postico producto, acutè rostrato, attenuato.*

THE ANOMALOUS CYRENA. Shell very thin, inflated, high, subtrigonal, covered with a thin greenish epidermis, purple within on the hinge and under the umboes; anterior side inflated, rounded, short; umboes inflated, rounded, ventral margin very convex; posterior side produced, sharply beaked, attenuated.

DESHAYES. Proc. Zool. Soc. 1854, p. 51.

Hab. Bay of Caraccas.

Very full and globular in front, compressed and narrowed to a point at the back.

Species 110. (Mus. Sowerby, odd valves.)

CYRENA MEXICANA. *Cyr. testâ ovatâ, inflatâ, tenui, epidermide obscurè fuscâ indutâ, intùs pallidissimè carneâ, ad latus posticum purpureâ; latere antico brevissimo; medio inflato; latere postico producto, margine latero-dorsali declivi, margine terminali obtuso, obtusissimè angulato.*

THE MEXICAN CYRENA. Shell ovate, inflated, thin, covered with a dull brown epidermis, very pale flesh-colour within, purple at the posterior side; anterior very short, middle inflated; posterior side produced, dorso-lateral margin sloped, terminal margin obtuse, very obtusely angular.

BRODERIP and SOWERBY. Zool. Journ. V. 5.

Hab. Mazatlan, Mexico.

Species 111. (Mus. Sowerby.)

CYRENA CEYLANICA. *Cyr. testâ magnâ, solidâ, subtrigonâ, subcompressâ, altâ, subæquilaterali, epidermide tenui, flavidâ, fimbriatim striatâ indutâ; latere postico obtusè biangulato, ante angulum anticum subconcavâ, post angulum posticum complanatâ, valdè declivi; latere antico breviùsculo, margine latero-dorsali complanato, declivi.*

THE CEYLON CYRENA. Shell large, solid, subtrigonal, subcompressed, high, subequilateral, covered with a thin, yellowish epidermis, with fringed striæ; posterior side obtusely two-angled, rather concave in front of the anterior angle; flattened, much sloped behind the posterior angle; anterior side rather short, latero-dorsal margin flattened, sloped.

CHEMNITZ. (Venus) Marl. and Chemn.

Venus coaxana. Gmel.

Cyrena Zeylanica. Lamarck.

Cyrena pallida. Deshayes.

Hab. Ceylon.

Species 112. (Mus. Brit.)

CYRENA COMPTA. *Cyr. testâ ovato-oblongâ, depressâ, tumidâ, crassâ, lævigatâ, epidermide pallidè flavidâ nitenti indutâ; latere antico brevi; latere postico producto, subattenuato, angulato, ante angulum subcompresso, margine dorsali declivi, margine terminali biangulato, truncato.*

THE SPRUCE CYRENA. Shell ovate-oblong, depressed,

tumid, thick, smooth, covered with a pale yellowish shining epidermis; anterior side short; posterior side produced, rather attenuated, angular, rather flattened in front of the angle; dorsal margin sloped, terminal margin biangular, truncated.

DESHAYES. Proc. Zool. 1854, p. 21.
Hab. —— ?

Species 113. (Mus. Sowerby.)

CYRENA BUSCHII. *Cyr. testâ veneriformi, ovato-subtrigonâ, solidâ, subcompressâ, epidermide fusco-flavidâ fimbriatim striatâ indutâ; latere antico brevi, prope marginem dorso-lateralem planulato; latere postico magis producto, margine dorso-laterali arcuato; umbonibus elevatis, versus latus anticum inclinatis.*

VON BUSCH'S CYRENA. Shell venus-shaped, ovately subtrigonal, solid, rather compressed, covered with a brownish-yellow epidermis; anterior side short, flattened near the dorso-lateral margin; posterior side more produced, dorso-lateral margin arched; umboes raised, leaning towards the anterior margin.

PHILIPPI —— ? Adams' Genera.
Lauta. Deshayes.
Hab. —— ?

Species 114. (Mus. Brit.)

CYRENA ÆQUILATERALIS. *Cyr. testâ subtrigonâ, compressâ, altâ, subæquilaterali, fulvo-subaurantiâ, lævigatâ; latere antico breviusculo, declivi, infra umbones excavato; latere postico paulò magis producto, infrà acuminato, prope marginem dorso-lateralem angulato.*

THE EQUILATERAL CYRENA. Shell rather trigonal, compressed, high, nearly equilateral, fulvous orange, smooth; anterior side rather short, sloped, hollowed under the umboes; posterior side a little more produced, acuminated below, with an angle near the dorso-lateral margin.

DESHAYES. Proc. Zool. Soc. 1854, p. 20.
Hab. Cayenne.

CYRENA.

	Plate.	Species.
æquilateralis. *Deshayes*	XIX.	114
Africana. *Krauss*	XIII.	59
ambigua. *Deshayes*	XV.	73
Angasi. *Prime*	XVII.	90
angulata. Deshayes, not met with		
anomala. *Deshayes*	XIX.	109
arata. *Blanford*	XVII.	93
arctata. Deshayes, not met with		
Australis. *Deshayes* (Batissa) *	V.	13
Australis. *Deshayes* (Corbicula) *	XVI.	82
Bengalensis. *Deshayes* (Corbicula) *	XI.	50
Bengalensis. *Lamarck* (Cyrena) *	VII.	23
Bensoni. *Deshayes*	XI.	44
Braziliana. *Deshayes*	XV.	79
Bullata. *Sowerby*	XIV.	68
Buschii. *Philippi*	XIX.	113
Caledonica. *Gassies*	X.	40
Caroliniensis. *Bosc.*	VIII.	31
Cashmierensis. *Deshayes*	XIII.	60
Ceylanica. *Chemnitz*	XIX.	111
Childreni. *Gray*	VI.	17
coaxana. *Gmel*	XIX.	111
compressa. *Mousson*	XII.	58
compta. *Deshayes*	XIX.	112
concinna. *Sowerby*	XIV.	66
consobrina. Caillaud	XII.	51
cor. *Lamarck*	XII.	51
corbuloides. *Deshayes*	VI.	21
cordiformis. *Deshayes*	VIII.	27
crassula. *Mousson*	XV.	72
Cumingii. *Deshayes*	XII.	53
Cyprinoides. *Guoy*	VII.	24
Cyrena. *Prime*	XVII.	95
cyreniformis. *Prime*	XIV.	69
decipiens. Deshayes, not met with		
depressa. Lamarck, not met with		
divaricata. *Deshayes*	VIII.	28
donaciformis. *Sowerby*	XIX.	108
erosa. *Deshayes*	XI.	46
Essingtonensis. *Deshayes*	IX.	36
eximia. *Dkr.*, not met with		
fallax. *Deshayes*	X.	41

	Plate.	Species.
Floridana. *Conrad*	XVIII.	102
fluminea. *Lamarck*	XII.	56
Fontainei. *D'Orbigny*	IX.	34
fortis. *Prime*	V.	16
fragilis. *Deshayes*	XVII.	98
fuscata. (Batissa) Prime	IV.	21
galatheæ. *Mörch*, not met with		
gigantea. *Prime*	I.	1
gracilis. *Prime* (Batissa) *	VI.	20
gracilis. *Prime* (Corbicula) *	XIV.	67
grandis. *Deshayes*	XIV.	71
Guaritziana. Krauss	XIII.	59
humerosa. *Deshayes*	VI.	18
incrassata. *Deshayes*	XVI.	86
inflata. *Prime*	IV.	10
insignis. *Deshayes*	III.	7
insignis. Deshayes	XIV.	68
Iravadica	XI.	45
isocardiodes. *Deshayes*	XVIII.	103
Japonica. *Prime*	XVII.	91
Jayensis. *Lea*	VI.	19
Jukesii. *Deshayes*	XVIII.	105
Keraudreni. *Lesson*	II.	6
Largillierti. *Philippi*	XIII.	61
lauta. Deshayes	XIX.	113
lenticularis. *Deshayes*	I.	2
limosa. *Maton*	XVII.	96
Lydigiana. *Prime*	XVI.	83
mactroides. *Desh.*, not met with		
Mallaccensis. *Deshayes*	XVI.	88
Manillensis. *Philippi*	XV.	74
maritima. C. B. *Adams*	VIII.	30
maxima. *Deshayes*	XV.	78
Mexicana. *Broderip* and *Sowerby*	XIX.	110
minor. *Prime*	III.	8
Moussoniana. *Deshayes*	XVII.	97
Mulleriana. *Prime*	XVII.	95
nitens. *Deshayes*	XVI.	89
Nepeanensis. *Lesson*	XV.	75
nitidula. *Deshayes*	X.	38
notabilis. *Deshayes*	XVIII.	107
obesa. *Hinds*	II.	5

* Owing to the separation of Cyrenæ into separate genera, authors have repeated specific names. The above instances were not observed till too late for avoidance or explanation in the plates.

	Plate.	Species.
oblonga. *Deshayes*	IX.	37
obscura. *Prime*	IX.	33
obsoleta. *Deshayes*	XVI.	85
occidens. *Benson*	XI. XIII.	48
olivacea. *Carpenter*	IX.	32
orientalis. *Lamarck*	XII.	54
ovalina. *Deshayes*	XV.	77
ovalis. *Prime*	XVIII.	101
pallida. Deshayes	XIX.	111
Papua. *Lesson*	VII.	22
Panamaensis. *Prime*	VIII.	29
Panormitana. *Bivon*, not met with		
Paracensis. *D'Orbigny*	XV.	81
Paranensis. *D'Orb.*, not met with		
Peruviana. *Deshayes*, not met with		
Petitiana. *Bourg*, not met with		
placida. *Deshayes*	XVIII.	106
Primeana. Mörch	XIII.	63
producta. *Deshayes*	IV.	12
prolongata. *Prime*	XVII.	94
pusilla. *Philippi*	XII.	57
radiata. *Hanley*	XI. XIII.	47
Ramondi. Bourg, not met with		
recurvata. Valenciennes, not met with		
regularis. *Prime*	XV.	76
rhomboidea. *Prime*	XII.	52
rivalis. *Von Büsch*	XIV.	65
rotundata. *Lea*	II.	4
Saigonensis —— ?	XIII.	62
salmacidæ. *Morelet*	XVII.	100
semisulcata. *Deshayes*	XVI.	84
similis. *Gray*	XIII.	64
sinuosa. *Deshayes*	VII.	26
solida. *Deshayes*	XVIII.	104
squalida. *Deshayes*	XVII.	99
striatella. *Deshayes*	XI.	49
sublobata. *Deshayes*	X.	39
suborbicularis. *Phil.*, not met with		
sulcatina. *Deshayes*	XIV.	70
sumatrensis. *Sowerby*	XIII.	62
tenebrosa. *Hinds*	V.	14
tenuistriata. *Prime*	XV.	80
trigona. *Deshayes*	XI.	43
Iravadica. *Blanford*	XI.	45
triangularis. *Metcalfe*	VII.	25
trigonella. *Lamck.*, not met with		
triquetra. *Deshayes*	II.	3
tumida. *Deshayes*	XVII.	92
turgida. *Lea*, not met with		
unioniformis. *Prime*	III.	9
Vanikorensis. *Quoy*, not met with		
variegata. *Deshayes*	XVI.	87
veneriformis. *Sowerby*	IV.	11
ventricosa. *Deshayes*	IX.	35
violacea. *Lamarck*	V.	15
Woodiana. *Lea*	XIII.	63
Yokohamensis	XII.	55
Zeylanica. Lamarck	XIX.	111

MONOGRAPH

OF THE GENUS

SPHÆRIUM.

"While Thee, by Whom were all things made, we praise
For ever, and tell out in sweetest lays
An endless Alleluia."—*Neale.*

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G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

SPHÆRIUM.

PLATE I.

Genus SPHÆRIUM. *Scopoli.*

MOLLUSCUM ACEPHOLOPODUM, BIMUSCULOSUM, FLUVIATILE, SIPHONIBUS SEPARATIS. *Testa tenuis, intùs tenuiter testacea, extùs cornea, æquivalvis, ferè æquilateralis, plerumque inflata. Cardo utrâque valvâ dentibus duobus cardinalibus divergentibus, lateralibus elongatis, compressis, duplicatis et simplicibus. Pallii impressionibus integris.*

MOLLUSC ACEPHOLOPODOUS, BI-MUSCULAR, FLUVIATILE, WITH SEPARATED SIPHONS. Shell thin, thinly shelly within, horny without, equivalve, nearly equilateral, generally inflated. Hinge in each valve with two cardinal diverging teeth, lateral teeth, two and one in each valve, elongated, compressed. Palleal impression entire.

Synonym. *Cyclas.* Bruguière.

The chief difference between this genus and Pisidium is to be found in the siphons of the animal, which are divided in the former, and separated in the latter. The shells, however, are in general to be distinguished by those of the present genus being less oblique, and more equilateral. Wherever there are rivers and lakes, are also to be found shells of the *Sphærium* genus, excepting, perhaps, in the torrid regions. They abound in Europe and North America. The British Museum, largely reinforced by the Cumingian Collection, presents a large array of species which are given in this monograph, besides others which are accessible to me; still, however, leaving some which cannot be got together for identification.

Species 1. (Mus. Brit.)

SPHÆRIUM STEINBUCHII. *Sph. testâ parvâ, politâ, subobliquâ, semipellucidâ, pallidâ; latere postico obliquè producto, margine dorsali declivi; latere antico breviùsculo; umbonibus prominentibus, versus laterem anticum inclinatis.*

STEINBUCH'S SPHÆRIUM. Shell small, polished, rather oblique, semipellucid, pale; posterior side obliquely produced, dorsal margin sloped; anterior side rather short; umboes prominent, leaning towards the anterior side.

MÖLLER. Adams. Geneva.

Hab. Greenland.

Species 2. (Mus. Brit.)

SPHÆRIUM TRANSVERSUM. *Sph. testâ transversè ovatâ, pallidè corneâ, tenui, opacâ, umbonibus ovatis, subcentralibus, margine dorsali rectiùsculo; latere antico breviùsculo, marginibus lateralibus subtruncatis, margine ventrali convexo.*

THE TRANSVERSE SPHÆRIUM. Shell transversely ovate, pale horn, thin, opaque, umboes ovate, subcentral, dorsal margin rather straight; anterior side rather shorter, posterior lateral margin, a little obliquely truncated, ventral margin convex.

SAY. Proc. Acad. Nat. Sci. Phil. 1862.

Hab. United States.

Species 3. (Mus. Brit.)

SPHÆRIUM RIVALIS. *Sph. testâ rectiùsculâ, subæquilaterali, inflatâ, transversâ, corneâ, fusco-subviridi, fasciatâ; umbonibus ovatis, magnis; margine ventrali recto, lateribus subtruncatis.*

THE RIVER SPHÆRIUM. Shell rather straight, nearly equilateral, inflated, transverse, horny, banded with greenish brown; umboes oval, large; ventral margin straight, sides rather truncated.

Drap. Moll. Pl. X.

Hab. Europe.

Generally regarded as a variety of *Sphærium corneum*, but more transverse and rhomboidal.

Species 4. (Mus. Sowerby.)

SPHÆRIUM RIVICOLUM. *Sph. testâ magnâ, ovatâ, tenuiter sulcâtâ, intensè fusco-viridi, intùs medio carneolâ, versus marginem cæruleâ; umbonibus subcentralibus, obtusis, margine dorsali utrinque declivi.*

THE RIVER-DWELLING SPHÆRIUM. Shell large, oval,

finely grooved, deep greenish-brown, within fleshy in the middle, blue towards the margin; umboes rather central, obtuse, dorsal margin sloped at both sides.

LAMARCK. Anim. s. Vert.

Cyclas corneum. Dilwyn.

Hab. Great Britain. Europe generally.

Species 5. (*f*, *a*, *b*, Pl. V. Mus. Brit.)

SPHÆRIUM LACUSTRE. *Sph. testâ ovatâ, inflatâ, pallidâ, lævi, latere antico breviori, latere postico vix obliquè truncato, margine dorsali subdeclivi.*

THE PALE SPHÆRIUM. Shell ovate, inflated, pale, smooth, anterior side shorter; posterior side, scarcely obliquely truncated, dorsal margin a little sloped.

DRAPARNAUD. Hist. Moll. p. 130, Pl. X. f. 6, 7.

Cyclas ovale. Ferrussac.

Cyclas pallidum. Gray.

Hab. Regent's Park, London. France.

Species 6. (Mus. Sowerby.)

SPHÆRIUM LENTICULARIS. *Sph. testâ subcompressâ, politâ, breviter ovali, corneo-grisescenti, altâ; umbonibus subcentralibus, margine dorsali utrinque declivè, margine postico obtusissimè truncato.*

THE LENTICULAR SPHÆRIUM. Shell rather compressed, polished, shortly oval, greyish horn, high; umboes rather central, dorsal margin sloped on each side; posterior margin very obtusely truncated.

SOWERBY.

Hab. ——? We have no locality for this rather peculiar shell.

Species 7. (Mus. Brit.)

SPHÆRIUM SULCATUM. *Sph. testâ magnâ, inflatâ, subrhomboideâ, validè sulcatâ, fusco-subviridi, transversâ; umbonibus subcentralibus, prominentibus; margine dorsali utrinque paulo declivè, marginibus lateralibus obliquè subtruncatis, margine ventrali rectiùsculo.*

THE GROOVED SPHÆRIUM. Shell large, inflated, rhomboidal, strongly sulcated, greenish brown, transverse; umboes nearly central, prominent; dorsal margin a little sloped on each side; lateral margins a little truncated obliquely; ventral margin rather straight.

LAMARCK. Anim. s. Vert.

Hab. Massachusetts.

Species 8. (Mus. Hanley.)

SPHÆRIUM INDICUM. *Sph. testâ subrotundâ, pallidâ, lævi, altiùsculâ; umbonibus subcentralibus, prominentibus, rotundis, margine ventrali convexo, margine dorsali posticè rectiùsculo.*

THE INDIAN SPHÆRIUM. Shell rather rounded, pale, smooth, rather high; umboes rather central, prominent, rounded, ventral margin convex, dorsal margin rather straight posteriorly.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. Loodianah, India.

Species 9. (Mus. Brit.)

SPHÆRIUM SCALDIANUM. *Sph. testâ oblongo-subquadratâ, pallidè aurantiâ, tumidâ, lævigatâ, subinæquilaterali, latere antico breviori; umbonibus prominentibus; margine dorsali postico rectiùsculo, margine ventrali rectiùsculo.*

SCALDI'S SPHÆRIUM. Shell oblong-subquadrate, palè orange, tumid, smooth, rather inequilateral, anterior side shorter; umboes prominent, postero-dorsal margin rather straight, ventral margin rather straight.

NORMAND. Notæ Cycl. Nord. p. 3, 1854.

Hab. Europe.

Species 10. (Mus. Brit.)

SPHÆRIUM CALYCULATUM. *Sph. testâ subquadratâ, complanatâ, compressâ, inæquilaterali; latere antico breviori, obliquè subtruncato, margine dorsali recto, brevi; latere postico expanso; obliquè quadrato, margine dorsali recto, paulò elevato; umbonibus acutis, tuberculo calyciformi desinenti.*

THE CAPPED SPHÆRIUM. Shell rather square, flattened, compressed, inequilateral; anterior side shorter, obliquely subtruncated, dorsal margin straight, short; posterior side expanded, obliquely square, dorsal margin straight, a little raised; umboes sharp, ending in a little cup-shaped tubercle.

DRAPARNAUD. Moll. Pl. X. f. 14, 15.

Hab. Europe.

Quite distinct from *Cyclas lacustris* of the same author.

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G.B. Sowerby del et Lith

Vincent Brooks Day & Son Imp

SPHÆRIUM.

PLATE II.

Species 11. (Mus. Brit.)

SPHÆRIUM NUCLEUS: *Sph. testâ tumidâ, altâ, pallidâ, corneâ, fasciis griseis ornatâ, subrhomboideâ; subæquilaterali; umbonibus magnis, obtusis, margine dorsali utrinque rectiùsculo, margine ventrali rectiùsculo, marginibus lateralibus subtruncatis.*

THE NUT-LIKE SPHÆRIUM. Shell tumid, high, pale, horny, ornamented with grey bands, subrhomboidal, nearly equilateral; umboes large, obtuse; dorsal margin rather straight on each side, ventral margin rather straight, lateral margins a little truncated.

STÜDER. Jay's Catalogue.

Hab. Moravia.

Species 12. (Mus. Brit.)

SPHÆRIUM PISIDIOIDE. *Cyr. testâ viridi, subdistanter sulcatâ, obliquâ, tumidâ, latiori quam altâ; latere postico obliquè producto, margine dorsali declivi; latere antico breviori, margine dorsali declivi; umbonibus elevatis, tumidis, rotundis.*

THE PISIDIUM-SHAPED SPHÆRIUM. Shell green, rather distantly grooved, oblique, tumid, longer than high; posterior side obliquely produced, dorsal margin sloped downwards, anterior side shorter, dorsal margin sloped, umboes elevated, tumid, rounded.

GRAY. MS. Brit. Mus.

Hab. Europe.

Species 13. (Mus. Brit.)

SPHÆRIUM STRIATINUM. *Sph. testâ subrhomboideâ, subdistanter sulcatâ, obliquâ; latere antico brevi, liris validis; latere postico obliquè producto, ad marginem ventralem obtusè angulato, liris subevanidis; margine dorsali declivi, margine postico-laterali obliquè truncato.*

THE LITTLE STRIATED SPHÆRIUM. Shell rather rhomboidal, rather distantly sulcated, oblique; anterior side short, ridges strong; posterior side obliquely produced, obtusely angular at the ventral margin, ridges almost disappearing; dorsal margin sloped, postero-lateral margin obliquely truncated.

LAMARCK. Anim. s. Vert. Cyclas, Sp. 10.

Hab. South America.

Species 14. (Mus. Brit.)

SPHÆRIUM TUMIDUM. *Sph. testâ subrotundâ, tumidâ, validè et distanter liratâ, fusco-corneâ, altâ, intùs subaurantiâ; latere antico rotundo, latere postico subobliquè producto, prope marginem ventralem subacuminato.*

THE TUMID SPHÆRIUM. Shell rather round, tumid, strongly and distantly ridged, horny-brown, high, rather orange within; anterior side round, posterior side rather obliquely produced, acuminated near the posterior margin.

BAIRD. Proc. Zool. Soc. 1863. p. 69.

Hab. Vancouver's Island.

Species 15. (Fig. *a*, *b*, Pl. IV.)

SPHÆRIUM PARTUMEIUM. *Sph. testâ pallidâ, flavidâ, vel griseo-corneâ, subrotundâ, tumidâ, altâ, lævigatâ; latere antico brevi, rotundo; latere postico subproducto, subquadrato.*

THE PRODUCTIVE SPHÆRIUM. Shell pale yellowish, horny-grey, rather rounded, tumid, high, smooth; anterior side short, round; posterior side a little produced, rather square.

SAY. Gould. Invertebrata, p. 75. f. 55.

Hab. Ohio.

Species 16. (Mus. Brit.)

SPHÆRIUM RUGOSUM. *Sph. testâ solidiùsculâ, subrhomboideâ, subviridi-fuscâ, medio sulcatâ, ad latera lævigatâ; latere antico brevi, ad marginem dorsalem subcuneato, latere truncato; latere postico producto, obliquè truncato.*

THE RUGOSE SPHÆRIUM. Shell rather solid, subrhomboidal, greenish-brown, sulcated in the

middle, smooth at the sides; anterior side short, a little cornered at the dorsal margin, truncated at the side; posterior side produced, obliquely truncated.

WHITMORE. MS. Mus. Brit.

Hab. —— ?

Species 17. (Fig. *a*, *b*, *c*, and *d*, Pl. V. Mus. Brit.)

SPHÆRIUM CORNEUM. *Sph. testâ breviter ovatâ, tumidâ, subrotundâ, fuscâ vel flavidâ, griseo-fasciatâ, vel albidâ; umbonibus obtusis, margine dorsali utrinque declivi; marginibus lateralibus obtusissimè truncatis.*

THE HORNY SPHÆRIUM. Shell shortly ovate, tumid, rather round, brown or yellow, or banded with grey or whitish; umboes obtuse, dorsal margin sloped on both sides; lateral margins very obtusely truncated.

LINNÆUS (*Tellina cornea.*) Syst. Nat.

Cyclas rivalis. Draparnaud.

Hab. Great Britain, Europe generally.

Species 18. (Mus. Brit.)

SPHÆRIUM TERVERIANUM. *Sph. testâ subglobosâ, altâ, ad apicem corneâ, ferè omninò castaneâ; latere antico ante umbones excavato; umbonibus prominentibus, latere postico inflato, margine dorsali declivi.*

TERVER'S SPHÆRIUM. Shell rather globose, high, horny at the apex, chestnut nearly all over, anterior side excavated in front of the umboes; umboes prominent, posterior side inflated, dorsal margin sloped.

DUPUY. Extr. Gall. Test. 87, 1849.

Hab. France.

Species 19. (Mus. Brit.)

SPHÆRIUM CONSOBRINUM. *Sph. testâ compressâ, subquadratâ, lævigatâ, corneâ; latere antico brevi, depresso; latere postico subexpanso; margine dorsali elevato, marginibus lateralibus ventralique rectiùsculis; umbonibus parvis, acutis.*

THE RELATED SPHÆRIUM. Shell compressed, subquadrate, smooth, horny; anterior side short, depressed; posterior side rather expanded; dorsal margin raised, lateral and ventral margins rather straight; umboes small, sharp.

CAILLAUD. Voyage de la Méroé.

Hab. Pyrmont.

A smaller species than *Sph. calyculatum*, resembling it, but without the calyx-shaped tubercle.

Species 20. (Mus. Brit.)

SPHÆRIUM OCCIDENTALE. *Sph. testâ subcompressâ, ovato-subquadratâ, corneo-flavescenti, lævigatâ; lateribus subtruncatis, margine dorsali antico declivi, postico paulò elevato.*

THE WESTERN SPHÆRIUM. Shell rather compressed, ovato-subquadrate, yellowish, horny, smooth; sides a little truncated, anterior dorsal margin sloped downwards, posterior a little raised.

PRIME. MS. Mus. Brit.

Hab. Montreal.

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G.B. Sowerby del et lith

Vincent Brooks Day & Son Imp

SPHÆRIUM.

PLATE III.

Species 21. (Mus. Brit.)

SPHÆRIUM MACULATUM. *Sph. testâ parvâ, altâ, compressâ, subquadratâ, tenui, corneâ, maculis nigris variegatâ; latere antico brevi, ante umbones paulò excavato; latere postico magis expanso, subquadrato, margine dorsali rectiùsculo, margine laterali latè truncato.*

THE SPOTTED SPHÆRIUM. Shell small, high, compressed, rather square, thin, horny, variegated with blackish spots; anterior side short, a little excavated in front of the umboes; posterior side more expanded, rather square, dorsal margin rather straight, lateral margin broadly truncated.

MORELET. Test. Nov. p. 25, 1851.

Hab. Yucatan, Mexico.

Species 22. (Mus. Brit.)

SPHÆRIUM MADAGASCARIENSE. *Sph. testâ ovato-subrhomboideâ, ferrugineâ, corneo-subviridi, fasciatâ, tumidâ, concentricè minutissimè striatâ, margine dorsali rectiùsculo, marginibus lateralibus subtruncatis; umbonibus obtusis.*

THE MADAGASCAR SPHÆRIUM. Shell ovate, sub-rhomboidal, ferruginous or banded with greenish horn, tumid, concentrically very minutely striated, dorsal margin rather straight, lateral margins rather truncated; umboes obtuse.

TRISTAN (?) MS. Mus. Brit.

Hab. Madagascar.

Species 23. (Mus. Brit.)

SPHÆRIUM STRAMINEUM. *Sph. testâ subrhomboideâ, solidâ, epidermide fulvo-flavidâ indutâ; medio versùs apicem distanter liratâ, ad latera et versus marginem ventralem lævigatâ; umbonibus rotundis prominentibus.*

THE STRAW-COLOURED SPHÆRIUM. Shell subrhomboidal, solid, covered with a fulvous yellowish epidermis; middle towards the apex, distantly ridged, smooth at the sides and towards the ventral margin; umboes rounded, prominent.

CONRAD. Silliman's Journal, Vol. XXV., p. 342.

Hab. Missouri.

Species 24. (Mus. Brit.)

SPHÆRIUM ELEGANS. *Sph. testâ tenui, altâ, compressâ, subquadratâ, lævigatâ, pallidè corneâ, lineis nigrescentibus et fasciis albis ornatâ; umbonibus subcentralibus, margine dorsali utrinque paulò declivi.*

THE ELEGANT SPHÆRIUM. Shell thin, high, compressed, rather flat, smooth, pale horn, ornamented with dark lines and white bands; umboes nearly central, dorsal margin a little sloped on each side.

ADAMS. Boston Journal of Science, 4, Pl. IV. f. 2.

Hab. Vermont.

Species 25. (Mus. Brit.)

SPHÆRIUM EBURNEUM. *Sph. testâ altâ, solidâ, eburneâ, lævigatâ, rotundo-subquadratâ; latere antico angustiori, breviori, rotundo; latere postico expanso, lato, subquadrato, margine dorsali recto, ad terminum cuneato.*

THE IVORY SPHÆRIUM. Shell high, solid, ivory-white, smooth, roundly subquadrate; anterior side narrower, shorter, rounded; posterior side expanded, broad, rather square, dorsal margin straight, cornered at the end.

ANTHONY (?) MS. Brit. Mus.

Hab. United States.

Species 26. (Mus. Brit.)

SPHÆRIUM FABALE. *Sph. testâ compressâ, leviter sulcatâ, castaneâ, epidermide ferrugineâ indutâ, subovatâ, depressâ, valdè inæquilaterali; latere antico brevi, declivi, subacuminato; latere postico producto, lato, margine dorsali elevato, subacuto, margine ventrali rectiùsculo.*

THE BEAN SPHÆRIUM. Shell compressed, slightly grooved, chestnut, covered with a ferruginous epidermis, rather oval, depressed, very inequilateral; anterior side short, sloped, rather acuminated; posterior side produced, broad, dorsal margin raised, slightly arched; ventral margin rather straight.

PRIME. Pro. Soc. Nat. Hist. Brit. IV. 1851, p. 159.

Sphærium castaneum. Prime.
Sphærium sulculosa. Charpentier.
Hab. United States.

Species 27. (Mus. Brit.)

SPHÆRIUM SIMILE. *Sph. testâ subovatâ vel subrhomboideâ, corneâ, subæquilaterali, liris validis, versus apicem fortioribus rugatâ; latere antico declivi, infrà subacuminato, latere postico obliquè et obtusissimè truncato.*

THE SIMILAR SPHÆRIUM. Shell subovate or subrhomboidal, horny, nearly equilateral, wrinkled with strong ridges, stronger towards the apex; anterior side sloped, rather acuminated below; posterior side obliquely and very obtusely truncated.

SAY. Nichol's Encycl. Am. Ed. 11.
Hab. North America.
Cyclas Sarragota. Lamarck.

It is not so rhomboidal as *Sphærium sulcatum*, and the sulci are larger at and towards the apex.

Species 28. (Mus. Brit.)

SPHÆRIUM TRUNCATUM. *Sph. testâ parvâ, pallidè corneâ, grisescenti, compressâ, subobliquâ; latere antico brevi, subrotundo; latere postico expanso, obliquè truncato.*

THE TRUNCATED SPHÆRIUM. Shell small, pale horn, greyish, compressed, rather oblique; anterior side short, rather round; posterior side expanded, obliquely truncated.

LINSLEY. Amer. Journ. Sci. N. Ser. VI. p. 234.
Hab. United States.

Species 29. (Mus. Brit.)

SPHÆRIUM INCURVUM. *Sph. testâ parvâ, oblongâ, compressâ, subferrugineâ; latere antico brevissimo, depresso; latere postico producto, truncato; umbonibus acuminatis, incurvis.*

THE INCURVED SPHÆRIUM. Shell small, oblong, compressed, rather ferruginous; anterior side very short, depressed; posterior side produced, truncated; umboes acuminated, turned inwards.

GUPPY. Proc. Sci. Asso. Trinidad. 1872.
Hab. Isl. Trinidad.

Species 30. (Mus. Brit.)

SPHÆRIUM ELEVATUM. *Sph. testâ rotundâ, altâ, pallidissimè aurantio-corneâ; latere antico brevi, rotundo; latere postico subexpanso, ad marginem dorsalem cuneato; umbonibus rotundis, prominentibus.*

THE RAISED SPHÆRIUM. Shell rounded, high, very pale, orange-tinted, horny; anterior side short, round; posterior side a little expanded, cornered at the dorsal margin; umboes round, prominent.

HALDEMAN. Proc. Ac. Nat. Hist. Phil. I. p. 53.
Hab. America.

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G.B. Sowerby del. et Lith.

Vincent Brooks Day & Son Imp.

SPHÆRIUM.

PLATE IV.

Species 31. (Mus. Sowerby.)

SPHÆRIUM CAROLINENSIS. *Sph. testâ subcompressâ, altâ, rotundo-subquadratâ, fusco-corneâ; latere antico subrotundo, angusto; latere postico obliquè obtusissimè truncato; margine ventrali paulò convexo; umbonibus parvis, haud prominentibus.*

THE CAROLINA SPHÆRIUM. Shell rather compressed, high, subquadrate, brown-horny; anterior side rather round, narrow; posterior side obliquely very obtusely truncated; ventral margin a little convex; umboes small, not prominent.

DESHAYES. Lamarck. N. ed. Anim. sans Vert.

Hab. Carolina, United States.

Species 32. (Mus. Brit.)

SPHÆRIUM RHOMBOIDEUM. *Sph. testâ subovatâ, pallidâ, lævi, altiùsculâ; latere antico breviùsculo, margine dorsali depresso, latere postico subexpanso, subtruncato; margine ventrali rectiùsculo; umbonibus prominentibus, acuminatis.*

THE RHOMBOIDAL SPHÆRIUM. Shell subovate, pale, smooth, rather high; anterior side rather short, dorsal margin depressed, posterior side a little expanded, slightly truncated; ventral margin rather straight; umboes prominent, acuminated.

SAY. Journ. Acad. Nat. Sci. 2. p. 380.

Hab. Vermont.

Species 33. (Mus. Sowb.)

SPHÆRIUM SECURIS. *Sph. testâ, subquadratâ, griseo-corneâ, tumidâ, lævigatâ, umbonibus productis, calyculatis; latere antico brevi, rectiùsculo; latere postico cuneato, latè truncato, margine ventrali paulò convexo.*

THE HATCHET SPHÆRIUM. Shell subquadrate, grey-horny, tumid, smooth; umboes produced, calyculated; anterior side short, rather straight; posterior side cornered, broadly truncated, ventral margin a little convex.

PRIME. Proc. Zool. Soc. Nat. Hist. Bost. iv. p. 160. 1851.

Hab. United States.

Species 34. (Mus. Brit.)

SPHÆRIUM DISTORTUM. *Sph. testâ solidâ, obliquâ, anticè sulcatâ, posticè lævigatâ, corneo-subviridi, latere antico brevi, rotundo, amplo; latere postico obliquè producto, angusto, post umbones excavato, margine terminali obliquè truncato.*

THE DISTORTED SPHÆRIUM. Shell solid, oblique, anteriorly grooved, posteriorly smooth, greenish horny, anterior side short, round, full; posterior side obliquely produced, narrow, excavated behind the umboes, terminal margin obliquely truncated.

C. B. ADAMS.

Hab. America.

Species 35. (Mus. Brit.)

SPHÆRIUM CREPLINI. *Sph. testâ subglobosâ, subrotundâ, lineis nigrescentibus et fasciis albidis concentricè cinctâ; latere postico brevi, ad marginem dorsalem cuneato; latere antico obliquè producto, rotundo, ante umbones excavato.*

CREPLIN'S SPHÆRIUM. Shell rather globose, rather rounded, concentrically belted with dark lines and whitish bands; posterior side short, cornered at the dorsal margin; anterior side obliquely produced, round, excavated in front of the umboes.

DUNKER. Zeit. für Malak. 20, 1845.

Hab. Europe.

This little rounded shell has a peculiar bend forward in the anterior side, with a hollow under the umboes.

Species 36. (Mus. Brit.)

SPHÆRIUM SOLIDUM. *Sph. testâ subquadratâ, solidâ, tumidâ, corneâ, griseo-fasciatâ, regulariter sulcatâ; umbonibus productis, subcentralibus, margine dorsali utrinque paulò declivi; lateribus obtusissimè subtruncatis, margine ventrali rectiùsculo.*

THE SOLID SPHÆRIUM. Shell subquadrate, solid, tumid,

horny, banded with grey, regularly grooved; umboes produced, nearly central, dorsal margin slightly sloped on both sides; sides very obtusely truncated, ventral margin rather straight.

Normand. Nat. Cycl. Valenc. 6, f. 34.

Hab. France.

Species 37. (Mus. Brit.)

Sphærium Novæ-Zelandiæ. *Sph. testâ parvâ, semipellucidâ, compressâ, corneâ, griseo-fasciatâ, lævi, subquadratâ, anticè rotundâ, posticè obtusè truncatâ, umbonibus subcentralibus.*

The New Zealand Sphærium. Shell small, semipellucid, compressed, horny, banded with grey, smooth, rather square, anteriorly rounded, posteriorly obtusely truncated; umboes nearly central.

Deshayes. Proc. Zool. Soc. 1854, p. 342.

Hab. New Zealand and New Holland.

Species 38. (Mus. Brit.)

Sphærium subtransversum. *Sph. testâ hyalinâ, compressâ, pallidè stramineâ, versus apicem corneâ; latere antico subacuminato; latere postico lato, subexpanso; margine dorsali recto, margine laterali obliquè truncato.*

The subtransverse Sphærium. Shell hyaline, compressed, pale straw, fleshy towards the apex; anterior side rather acuminated; posterior side broad, slightly expanded; dorsal margin straight, lateral margin obliquely truncated.

Prime. Proc. Zool. Soc. 1860, 322.

Hab. Mexico.

Species 39. (Mus. Brit.)

Sphærium solidulum. *Sph. testâ ovato-subtrigonâ, solidâ, rugatâ, rugis versus apicem magis distantibus; latere antico breviusculo, declivi; latere postico obliquè truncato, prope marginem ventralem producto, subacuminato, margine dorsali declivi.*

The solid small Sphærium. Shell ovate-subtrigonal, solid, wrinkled, wrinkles more distant towards the apex; anterior side rather short, sloped, posterior side obliquely truncated, produced near the ventral margin, slightly acuminated, dorsal margin sloped.

Prime. Proc. Soc. Nat. Hist. Bost. iv. 158, 1852.

Hab. North America.

Species 40. (Mus. Brit.)

Sphærium punctiferum. *Sph. testâ parvâ, compressâ, obliquè subrotundâ, semipellucidâ, pallidissimâ, umbonibus anticè inclinatis, acutis; margine dorsali utrinque recto; margine postico-ventrali subproducto.*

The punctured Sphærium. Shell small, compressed, a little obliquely rounded, semipellucid, very pale, umboes leaning anteriorly, sharp, dorsal margin straight on each side; postero-ventral margin slightly produced.

Guppy ——? MS. Mus. Brit.

Hab. Trinidad.

17.c

41.

42.

43.

44.a

44.b

a 45 b.

5.b

46.

47.

G.B. Sowerby del. et. Lith.

Vincent Brooks Day & Son Imp.

SPHÆRIUM.

PLATE V.

Plate V. (Mus. Brit.)

Fig. 17 *d*. Sphærium corneum, var. *flavescens*, Macgillivray v, Pl. II.

Fig. 5 *b*. Sphærium lacustre. See Plate I.

Species 41. (Mus. Brit.)

SPHÆRIUM INCONSPICUUM. *Sph. testâ securiformi, flavido-carneâ, supernè succineâ, lævigatâ, obliquâ, inæquilaterali; latere antico brevi, obliquè truncato; latere postico subexpanso, margine postico ventrali obliquè producto, margine dorsali elevato; margine ventrali rectiùsculo, lato; umbonibus productis, subacuminatis.*

THE INCONSPICUOUS SPHÆRIUM. Shell hatchet-shaped, yellowish-flesh, amber above, smooth, oblique, inequilateral; anterior side short, obliquely truncated; posterior side a little expanded; postero-ventral margin obliquely produced, dorsal margin raised; ventral margin rather straight, broad; umboes produced, a little acuminated.

PRIME. Proc. Zool. Soc. Bost.

Hab. Asia Minor.

Species 42. (Mus. Brit.)

SPHÆRIUM BORNEENSE. *Sph. testâ oblongâ, ferrugineâ, tenuiter striatâ, fusco-obscuro angulatim maculatâ; latere antico subrotundo; latere postico obliquo, subquadrato, margine ventrali rectiùsculo; margine dorsali utrinque paulò declivi.*

THE BORNEAN SPHÆRIUM. Shell oblong, ferruginous, finely striated, angularly spotted with dull brown; anterior side rather round; posterior side oblique, rather square, ventral margin rather straight, dorsal margin on each side a little sloped.

SOWERBY.

Hab. Borneo.

Species 43. (Mus. Sowerby.)

SPHÆRIUM ELONGATUM. *Sph. testâ magnâ, oblongâ, tumidâ, subovatâ, subviridi, versus apicem griseo-corneâ; umbonibus obtusis, depressis, subcentralibus; latere antico breviùsculo; latere postico paulò magis obliquè producto, margine laterali obliquè subtruncato; margine ventrali rectiùsculo, elongato; margine dorsali utrinque recto, brevi.*

THE ELONGATED SPHÆRIUM. Shell large, oblong, tumid, subovate, greenish, horny grey towards the apex; umboes obtuse, depressed, nearly central; anterior side rather short; posterior side a little more obliquely produced, lateral margin obliquely slightly truncated; ventral margin rather straight, elongated; dorsal margin on each side straight, short.

SOWERBY.

Hab. —— ?

We have no information respecting the locality of this rather handsome species, of which the three fine specimens in our possession are the only ones we have seen.

Species 44. (*f*, *a*, *b*, Mus. Brit.)

SPHÆRIUM MORMONICUM. *Sph. testâ solidâ, subquadratâ, ferè lævigatâ, altâ, subæquilaterali, corneâ, fusco-fasciatâ et lineatâ; intùs cæruleâ, fasciatâ; lateribus obtusissimè truncatis; umbonibus rotundis obtusis; margine dorsali utrinque brevi, vix declivi.*

THE MORMON'S SPHÆRIUM. Shell solid, rather square, nearly smooth, high, subequilateral, horny, banded and lineated with brown; bluish within, banded; sides very obtusely truncated; umboes rounded, obtuse, dorsal margin short on each side, scarcely sloped.

SOWERBY.

Hab. Great Salt Lake.

Broader and more solid than the European Sph. rivularis.

Species 45. (Fig. *a*, *b*, Mus. Brit.)

SPHÆRIUM CAPENSE. *Sph. testâ subquadratim ovatâ, tumidâ, ferrugineâ, intùs subvinosâ, fasciatâ; umbonibus rotundis; latere antico brevi, depresso,*

rotundo; latere postico obscurè angulato, obtusissimè subquadrato.

THE VINOUS SPHÆRIUM. Shell subquadrately ovate, tumid, ferruginous, a little wine-coloured, banded; umboes rounded; anterior side short, depressed, rounded; posterior side obtusely angular, very obtusely quadrate.

SOWERBY.

Hab. S. Africa.

Sphærium Capense of Krauss is a more shortly ovate and more compressed lenticular shell than this.

Species 46. (Mus. Brit.)

SPHÆRIUM TRANSLUCIDUM. *Sph. testâ parvâ, translucidâ, subcompressâ, oblongâ, anticè subacuminatâ, posticè expansâ, latè subtruncatâ, margine ventrali convexo, lato, margine dorsali breviùsculo, recto; umbonibus acutis.*

THE TRANSLUCID SPHÆRIUM. Shell small, translucid, rather compressed, oblong, anteriorly slightly acuminated, posteriorly expanded, broadly subtruncated, ventral margin convex, broad; dorsal margin rather short, straight; umboes sharp.

SOWERBY.

Hab. Palm-tree Creek, Australia.

Species 47. (Mus. —— ? Copied.)

SPHÆRIUM FERRUGINEUM. *Sph. testâ parvâ, tenui, fuscâ, obliquâ, lævi, valdè inæquilaterali; latere antico brevissimo, angusto, subacuminato, margine ventrali acclivo; latere postico expanso, oblongo, margine dorsali convexiùsculo; margine posticolaterali obliquè subtruncato.*

THE FERRUGINOUS SPHÆRIUM. Shell small, thin, brown, oblique, smooth, very inequilateral; anterior side very short, narrow, subacuminate, ventral margin sloped upwards; posterior side expanded, oblong, dorsal margin rather convex, postero-lateral margin obliquely subtruncated.

KRAUSS. Südafrikanischen Mollusken.

Hab. River Kynsa, S. Africa.

Resembling *Sph. incurvum.*

SPHÆRIUM.

	Plate.	Species.
Borneense. *Sowerby*	V.	42
calyculatum. *Draparnaud*	I.	10
Capense. *Krauss*	V.	45
Caroliniensis. *Deshayes*	IV.	31
castaneum. Prime	III.	26
consobrinum. *Cailland*	II.	19
corneum. *Linnæus*	II. V.	17
creplini. *Dunker*	IV.	35
distortum. *C. B. Adams*	IV.	34
eburneum. *Anthony*	III.	25
elegans. *Adams*	III.	24
elevatum. *Haldeman*	III.	30
elongatum. *Sowerby*	V.	43
fabale. *Prime*	III.	26
ferrugineum. *Krauss*	V.	47
inconspicuum. *Prime*	V.	41
incurvum. *Guppy*	III.	29
Indicum. *Deshayes*	I.	8
lacustre. *Draparnaud*	I. V.	5
lenticularis. *Sowerby*	I.	6
maculatum. *Morelet*	III.	21
Madagascariense. *Tristan?*	III.	22
Mormonicum. *Sowerby*	V.	44
Novæzelandiæ. *Deshayes*	IV.	37
nucleus. *Stüder*	II.	11
occidentale. *Prime*	II.	20
ovale. Ferrussac	I.	5
pallidum. Gray	I.	5
partumeium. *Gould*	II.	15
Pisidioides. *Gray*	II.	12
punctiferum. *Guppy*	IV.	40
rhomboideum. *Say*	IV.	32
rivalis. *Drap*	I.	3
rivicolum. *Lamarck*	I.	4
rugosum. *Whitmore*	II.	16
scaldianum. *Normand*	I.	9
securis. *Prime*	IV.	33
simile. *Say*	III.	27
solidum. *Normand*	IV.	36
solidulum. *Prime*	IV.	39
Steinbuchii. *Möller*	I.	1
stramineum. *Conrad*	III.	23
striatinum. *Lamarck*	II.	13
subtransversum. *Prime*	IV.	38
sulcatum. *Lamarck*	I.	7
sulculosum. Charpentier	III.	26
Terverianum. Dupuy	II.	18
translucidum. Sowerby	V.	46
transversum. *Say*	I.	2
truncatum. *Tinsley*	III.	28
tumidum. *Baird*	II.	14

MONOGRAPH

OF THE GENUS

PLANORBIS.

Lord, Thy glory fills the heavens,
Earth is with its fulness stor'd;
Unto Thee be glory given,
Holy, holy, holy, Lord! — *Bishop Mant.*

1a.

2.

3.

1b.

4.

a.

b.

5.

6a.

7a.

7b.

6b.

G.B. Sowerby del. & Lith.

Vincent Brooks Day & Son Imp.

PLANORBIS.

PLATE I.

Genus PLANORBIS. *Guettard.*

Molluscum aquaticum.

Testa interdum sinistralis, spiralis, discoidea, spirâ depressâ, anfractibus tribus ad septenos; aperturâ semilunari, vel ovatâ vel trigonâ, margine plerùmque tenui.

MOLLUSC, FRESHWATER. Shell spiral, sometimes sinistral, spire depressed, whorls three to seven; aperture semilunar, or ovate or trigonal, margin generally thin.

Synonyms. *Coretus*, Adams. Orbis, *Schroet.*

Inclusis. *Planorbulâ*, Hald. *Segmentinâ.*

The late Mr. G. B. Sowerby, in his *Genera of Shells*, expresses his conviction that the Planorbes are sinistral shells, because when the shell is so placed that the aperture is on the left side, the whole of the whorls of what seems to be the spire are visible, while what is then the lower disc is hollow, and the apical whorls are more or less engulphed. This, however, is not the case throughout the genus, but chiefly among the typical forms. The Messrs. Adams describe the genus as consisting of dextral shells. My impression is that some are sinistral and others dextral. My attention had not been drawn to the subject before several plates had been drawn, and some of the figures being placed as if dextral will seem to have an upside-down appearance. The genus is widely diffused throughout all parts of the globe. Wherever there are ditches, ponds, wells, and rivers, there the Planorbes appear.

Species 1. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS CORNEUS. *Pla. testâ tumidâ, latâ, sinistrali, corneâ, lævigatâ, medio anfractuum castaneâ; spirâ concaviùsculâ, anfractibus senis, convexiùsculis, rapidè crescentibus, prope suturam rotundis; tum declivibus, infrà ventricosâ; disco inferiori concavâ, anfractibus rotundis, apicalibus obtectis, aperturâ latâ, altâ, subquadratâ.*

THE HORNY PLANORBIS. Shell tumid, broad, sinistral, horny, smooth, chestnut in the middle of the whorls; spire rather concave; whorls six, rather convex, rapidly increased, rounded near the suture, then sloped, ventricose below; lower disc concave, whorls rounded, apical hidden; aperture broad, high, subquadrate.

LINNÆUS. Systema Naturæ.

Hab. Great Britain.

The specimen represented by figure *b* belongs to a recently discovered albino variety.

Species 2. (Mus. Brit.)

PLANORBIS TRIVOLVIS. *Pla. testâ tumidâ, altâ, pallidè fuscâ, obliquè rugatâ, sinistrali; spirâ excavatâ, angustâ, supra suturam elevatâ, angulatâ; anfractibus quaternis supernè, tribus infernè apparentibus; aperturâ subtrigonâ, altâ, intùs castaneo-marginatâ.*

THE THREE-WHORLED PLANORBIS. Shell tumid, high, pale brown, obliquely wrinkled, sinistral; spire hollowed, narrow, raised above the suture, angular; whorls, four appearing above, three below; aperture subtrigonal, high, bordered inside with chestnut.

SAY. American Conchology, 1860.

Hab. New York.

Species 3. (Mus. Sowerby.)

PLANORBIS PERUVIANUS. *Pla. testâ albidâ, semipellucidâ, altiùsculâ, sinistrali, spirâ angustâ, anfractibus quaternis, angustis, supra suturam elevatis; ultimo magno, subdeclivi; versus aperturam valdè expanso; suturâ profundâ; aperturâ subtrigonâ, supra infraque anfractum ultimum productâ, disco inferiori excavato, anfractibus rotundis, apicali obtecto.*

THE PERUVIAN PLANORBIS. Shell whitish, semipellucid, rather high, sinistral, spire narrow, whorls four, narrow, raised above the suture; last large, somewhat sloped, much expanded towards the aperture; suture deep; aperture subtrigonal, produced above and below the last whorl; lower disc hollow, whorls rounded, the apical one hidden.

BRODERIP. Proc. Zool. Soc. 1842, f. 125.

Hab. Peru.

Species 4. (And Fig. *b*, Pl. X., Mus. Sowerby.)

PLANORBIS CORPULENTUS. *Pla. testâ tenui, inflatâ, subglobosâ, subviridè corneâ, concentricè obliquè rugatâ, altâ, supernè angulatâ, infrà subangulatâ, sinistrali; spirâ infundibulatâ, anfractibus supra suturam elevatis, angulatis, lateraliter planulatis; medio altis, convexis; ultimo versus aperturam expansis; aperturâ maximâ, supra infraque ultimum anfractum productis, supernè subangustatâ, infernè latâ, margine expanso, intùs castaneo; disco superiori profundè umbilicato.*

THE CORPULENT PLANORBIS. Shell thin, inflated, subglobose, greenish horny, concentrically obliquely wrinkled, high, angular above, a little angular below, sinistral; spire funnelled, whorls raised above the suture, angular, laterally flattened, high, convex in the middle; last expanded towards the aperture; aperture very large, produced above and below the last whorl, rather narrow above, broad below, margin expanded, chestnut within; upper disc deeply umbilicated.

SAY. Albers. Mon. Pl. III. f. 79.

Hab. Winnipeck River.

It is difficult to distinguish the less developed forms of this species from the more elevated forms of *Planorbis lentus*. The latter is a stouter shell, with the wrinkles more defined, and it is never quite so high. *Planorbis trivolvis* is considerably more depressed than either.

Species 5. (Mus. Sowerby, &c.)

PLANORBIS COMPLANATUS. *Pla. testâ dextrali corneo-fulvâ, lævigatâ, compressâ, supernè convexiùsculâ, infernè planulatâ; spirâ medio subexcavatâ; anfractibus quinis, moderatè crescentibus, ultimo infrà carinatis; aperturâ obliquè subovatâ, supra anfractum ultimum elevatâ et productâ.*

THE FLATTENED PLANORBIS. Shell horny fulvous, smooth, compressed, rather convex above, flattened below; spire a little hollowed in the middle; whorls five, increasing moderately, last keeled below; aperture obliquely subovate, raised and produced above the last whorl.

LINNÆUS. Systema Naturæ.

Planorbis marginatus. Draparnaud.

Planorbis umbilicatus. Müller.

Hab. France, England, Sicily.

Species 6. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS OLIVACEUS. *Pla. testâ sinistrâ, depressâ, olivaceo-fuscâ, nitenti, latâ, supernè declivi, infrà latissimâ, spirâ concavâ, angustatâ, anfractibus senis, compressis, supra suturam paulò elevatis, tum lentè declivibus; aperturâ subtrigonâ, margine inferiori obliquè productâ; disco inferiori concavo.*

THE OLIVE PLANORBIS. Shell sinistral, depressed, olive-brown, shining, broad, sloped above, very broad beneath; spire concave, narrow; whorls six, compressed, a little raised above the suture, then gently sloped; aperture subtrigonal, lower margin obliquely produced; lower disc concave.

SPIX. Testacea Braziliana, p. 26, Pl. XVIII. f. 1, 2.

Planorbis Cumingianus. Dunker. Proc. Zool. 1848.

Hab. Brazil.

Species 7. (Mus. Brit.)

PLANORBIS BICARINATUS. *Pla. testâ sinistrali, tenui, lævigatâ, altissimâ, pallidè stramineâ; spirâ angustâ, propemodè infundibulatâ, anfractibus tribus, supernè infernèque carinatis; ultimo anfractu maximo, ad aperturam altissimo, supernè acuminato, infrà latiùsculo; disco inferiori profundè umbilicato, anfractu apicali obtecto.*

THE TWO-KEELED PLANORBIS. Shell sinistral, thin, smooth, very high, pale straw; spire narrow, deeply funnelled, whorls three, keeled above and below; last whorl very large, very high at the aperture, acuminated above, rather wide below; lower disc deeply umbilicated, apical whorl hidden.

SAY. Journ. Nat. Sci. Phil.

Hab. River Ohio.

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G.B. Sowerby del et Lith

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PLANORBIS.

PLATE II.

Species 8. (Mus. Sowb.)

PLANORBIS NAUTILEUS. *Pla. testâ albidâ, parvâ, subdepressâ, anfractibus quatuor, rapidè crescentibus, liris corneis, ad marginem spinosis annulatis, ultimo disjuncto, disco superiori planulato, anfractibus rotundo-depressis; disco inferiori latè usque ad apicem umbilicato.*

THE NAUTILOID PLANORBIS. Shell whitish, small, rather depressed, whorls four, quickly enlarging, ridges horny, annulated with horny ridges spinous at the margin, last disjoined, upper disc flattened with round-depressed whorls; lower disc broadly umbilicated as far as the apex.

LINNÆUS. Systema Naturæ.

Planorbis imbricatus. Müller.

Planorbis cristatus. Draparnaud.

Hab. France, Great Britain.

Species 9. (Fig. *a*, *b*, Mus. Sowb.)

PLANORBIS CONTORTUS. *Pla. testâ fulvâ, mediocriter depressâ, supernè planulatâ, infrà angulatim umbilicatâ; anfractibus senis, lentè crescentibus, angustis, supernè rotundatis, infrà ad marginem umbilici angulatis, umbilico angusto, profundo; aperturâ semilunari.*

THE EVEN-WHORLED PLANORBIS. Shell fulvous, moderately depressed, flattened above, angularly umbilicated below; whorls six, slowly increased, narrow, rounded above, angular at the edge of the umbilicus, umbilicus narrow, deep; aperture semi-lunar.

MÜLLER. Drap. Mol. Pl. I. f. 39–41.

Planorbis crassus —— ?

Planorbis umbilicatus —— ?

Hab. England, France.

Species 10. (Fig. *a*, *b*, Mus. Sowb.)

PLANORBIS GLABER. *Pla. testâ subaurantiâ, nitenti, altiùsculâ, anfractibus tribus, rapidè crescentibus, ultimo lato, supernè subplanulatis, disco superiori quam inferior angustiori, disco inferiori plano, tuberculato; aperturâ obliquâ, labio externo convexè obliquo.*

THE SMOOTH PLANORBIS. Shell somewhat orange, shining, rather elevated; whorls three, quickly increasing; the last wide, rather flattened at the top, upper disc a little narrower than lower; lower disc flat, tuberculated; aperture oblique, outer lip convexly oblique.

JEFFREYS —— ? British Mollusca, &c.

Planorbis lævis. Alder.

Hab. Penzance, Falmouth, Swansea, Belfast, &c.

Species 11. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS CAMPANULATUS. *Pla. testâ altâ, tenuissimè obliquè liratâ; anfractibus senis, rapidè crescentibus, externo magno; disco superiori profundè excavato, anfractibus internis cœlatis, externis rotundis, ultimo versus aperturam contracto, tùm expanso; disco inferiori anfractibus prope suturam angulatis; aperturâ subpyriformi, expansâ, supernè elevatâ, intùs contractâ.*

THE BELL PLANORBIS. Shell high, finely obliquely ridged; whorls six, rapidly increased, outer one large; upper disc deeply hollow, inner whorls hidden, outer rounded, last contracted towards the aperture, then expanded; lower disc with whorls angular near the suture; aperture rather pyriform, expanded, raised above, contracted within.

SAY. Journ. Am. Soc. Phil. Vol. II. p. 166.

Hab. Newport, Iowa, U.S.

Species 12. (Mus Sowerby.)

PLANORBIS CARINATUS. *Pla. testâ depressâ; anfractibus quaternis, extùs paulò infra medium acutè carinatis; ultimo lato; disco superiori excavato, anfractibus convexis; disco inferiori magis convexo, anfractibus subplanulatis.*

THE KEELED PLANORBIS. Shell depressed; whorls four, sharply keeled on the outer side a little below the middle; last broad; upper disc hollow, whorls convex; lower disc more convex, with rather flattened whorls.

MÜLLER. Drap. Mol. Pl. 2, f. 13, 14.

Helix planorbis. Linnæus.

Planorbis planatus —— ?

Planorbis lutescens. Lamarck.
Hab. Britain and other parts of Europe.

Resembling *Planorbis marginatus*, but with outer whorls wider, and the keel planed more towards the middle of the whorls.

Species 13. (Fig. *a*, *b*, Mus. Brit.)

Planorbis vortex. *Pla. testâ depressâ, utrinque complanatâ; anfractibus octavis, angustissimis, lentè crescentibus; disco superiori subexcavato, inferiori paulò convexo, anfractibus angustè prope suturam elevatis.*

The vortex Planorbis. Shell depressed, flattened on both sides; whorls eight, very narrow, slowly increasing; upper disc a little hollow, lower a little convex, with whorls narrowly raised near the suture.

Linnæus. (*Helix*) Systema Naturæ.
Planorbis compressus. Michelet.
Hab. Europe generally.

Species 14. (Fig. *a*, *b*, Mus. Sowerby.)

Planorbis spirorbis. *Pla. testâ compressâ; anfractibus senis, lentè crescentibus, supernè angustioribus; disco superiori angustiori, planulato; disco inferiori concavo; aperturâ supra anfractum ultimum elevatâ; infrà productâ, rotundâ.*

The spiroribis Planorbis. Shell compressed; whorls six, slowly increasing, narrower above; upper disc narrower, flattened; lower disc concave; aperture raised above the last whorl, produced, rounded below.

Müller. Verm., Test. et Fluv. p. 161. No. 347.
Hab. Britain, France.

Species 15. (Fig. *a*, *b*, Mus. Sowerby.)

Planorbis nitidus. *Pla. testâ compressâ, succineâ, medio obtusè angulatâ, suprà infràque ferè æqualiter convexâ; ultimo anfractu maximo; disco spirali contracto, planato, anfractibus internis angustis; disco inferiori latè excavato.*

The neat Planorbis. Shell flattened, amber, obtusely angular in the middle, almost equally convex above and below: last whorl very large; spiral disc contracted, flattened, with narrow inner whorls; lower disc broadly excavated.

Müller. Drap. Moll. Pl. 2, f. 20–22.
Hab. Britain, France.

Species 16. (Fig. *a*, *b*, Mus. Sowerby.)

Planorbis lacustris. *Pla. testâ compressâ, succineâ, internè divisâ, lineis rubris distantibus, obliquè concentricis extùs notatâ; supernè subconicâ; spirâ minimâ; medio subacutè angulato, infra angulum planulato, umbilicato.*

The lake Planorbis. Shell compressed, amber, internally divided, externally marked by distant obliquely concentric red lines; somewhat conical above; spire very small; middle rather sharply angular, flattened below the angle, umbilicated.

Lightfoot. —— ? Brit. Moll.
Segmentina lineata. —— ?
Hab. Ponds and ditches in England.

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21b

20b

20c

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23.

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24.

b

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PLANORBIS.

PLATE III.

Species 17. (Mus. Sowerby).

PLANORBIS ALBUS. *Pla. testâ pallidissimâ, depressâ, spiraliter liris tenuibus hirsutis ornatâ; anfractibus paucis, ultimo maximo; aperturâ obliquè productâ; disco superiori lenticulari, disco inferiori concavo.*

THE WHITE PLANORBIS. Shell very pale, depressed, spirally ornamented with thin hairy ridges; whorls few, last very large; aperture obliquely produced; upper disc lenticular: lower disc concave.

MÜLLER. Drap. Moll. Pl. I. fig. 45–48.

Planorbis hispidus. Draparnaud.

Hab. Britain, France.

Species 18. (Mus. Sowb.)

PLANORBIS ARMIGERUS. *Pla. testâ subdepressâ, solidiùsculâ, pallidè corneâ; anfractibus quinis, subcompressis, ultimo supernè subcontracto, supra anfractus spirales elevato, versus aperturam depresso; disco inferiori profundè umbilicato; aperturâ declivi, intùs prope marginem incrassato, ovato.*

THE ARMOUR-BEARING PLANORBIS. Shell rather depressed, solid, pale horny; whorls five, rather compressed, last rather contracted above, raised above the spiral whorls, depressed towards the aperture; lower disc deeply umbilicated; aperture sloped, thickened within near the margin, ovate.

SAY. Haldeman's Monograph, Pl. IV. f. 11–15.

Hab. New York.

Species 19. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS SUCCINEUS. *Pla. testâ depressâ, succineâ, politâ; anfractibus quaternis, sublentè crescentibus, apicalibus angustis, externo tumido; disco inferiori latè concavo, subcomplanato; aperturâ depressâ, obliquè ovatâ, angustâ.*

THE AMBER PLANORBIS. Shell depressed, amber, polished, whorls four, rather slowly increasing, apical ones narrow, last tumid; lower disc widely concave, rather flattened; aperture depressed, obliquely ovate, narrow.

SOWERBY.

Hab. —— ?

Two specimens are all I have seen of this pretty little amber-coloured species.

Species 20. (Fig. *a*, *b*, *c*, Mus. Brit.)

PLANORBIS REDFIELDI. *Pla. testâ pallidè fulvâ, altâ; anfractibus paucis, suprà infràque carinatis; disco superiori profundè excavato, ultimo anfractu convexo; disco inferiori profundissimè umbilicato; aperturâ altissimâ, supernè expansâ, auriformi, suprà infràque angulatâ.*

THE EARED PLANORBIS. Shell pale fulvous, high; whorls few, keeled above and below; upper disc deeply excavated, last whorl convex; lower disc very deeply umbilicated; aperture very high, expanded above, auriform, angular above and below.

C. B. ADAMS. Conch. Contrib. p. 23.

Hab. Jamaica.

Species 21. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS COARCTATUS. *Pla. testâ altâ, pallidè stramineâ; anfractibus quinis, compressis, suprà infràque rotundè angulatis, medio convexis; disco superiori profundè excavato, disco inferiori complanato, anfractibus gradatim crescentibus, ultimo anfractu versus aperturam angustato, aperturâ angustâ, subovatâ, margine paulò expanso, intùs coarctato.*

THE CONTRACTED PLANORBIS. Shell high, pale straw; whorls five, compressed, roundly angular above; convex in the middle; upper disc deeply excavated; lower disc flattened, whorls gradually increasing, last whorl narrow towards the aperture; aperture narrow, rather oval, margin a little expanded, narrow within.

SOWERBY.

Hab. —— ?

Species 22. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS ORBICULATUS. *Pla. testâ depressâ, albâ, semipellucidâ; anfractibus quinis, supernè convexo-planulatis, latiùsculis, infrà angustatis; aperturâ obliquè elevatâ, margine inferiori sursùm acclivi.*

THE ORBICULAR PLANORBIS. Shell depressed, white, semipellucid; whorls five, convexly flattened above, rather broad, narrow below; aperture obliquely raised, lower margin sloped upwards.

MORELET —— ? Adams.

Hab. —— ?

Species 23. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS PHILIPPINARUM. *Pla. testâ depressâ, griseâ, subopacâ; anfractibus senis, subcompressis, suprà infràque convexiùsculis, medio obtusissimè angulatis; disco inferiori planulato; disco superiori magis concavo; aperturâ supernè paulò elevatâ.*

THE PHILIPPINE PLANORBIS. Shell depressed, grey, rather opaque; whorls six, rather compressed, rather convex above and below, very obtusely angular in the middle; lower disc flattened, upper disc more concave; aperture a little raised above.

DUNKER. C. B. Adams. P. Z. 1848.

Hab. Philippines.

This shell is stouter and deeper than the preceding, and the discs are less flattened.

Species 24. (Mus. Sowerby.)

PLANORBIS LUGUBRIS. *Pla. testâ altiùsculâ, tenui, lævigatâ, nitenti, castaneâ; anfractibus quinis, supernè rotundis, latiùsculis, infrà magis contractis; disco superiori profundè excavato, disco inferiori subviridi, subcontracto.*

THE DARKSOME PLANORBIS. Shell rather deep, thin, smooth, shining, chestnut; whorls five, rather rounded above, rather broad, more contracted below; upper disc deeply excavated; lower disc greenish, rather contracted.

WAGNER. Spix, Testacea Braziliana. P. 27. No. 2.

Hab. Brazil.

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PLANORBIS.

PLATE IV.

Species 25. (Mus. Sowerby.)

PLANORBIS BIANGULATUS. *Pla. testâ altiùsculâ, solidâ, fumoso-fuscâ, utrinquè angulatim latè umbilicatâ dextrali; anfractibus paucis, suprà infràque subcarinatis, aperturâ subtrigonâ, declivi, infrà acuminatâ labio externo intùs incrassato.*

THE TWO-ANGLED PLANORBIS. Shell rather high, solid, smoky-brown, angularly broadly umbilicated on each side; whorls few, keeled above and below; aperture subtrigonal; sloped, acuminated below; outer lip thickened within.

—— ? Sowerby.

Hab. Brazil.

The whorls are not flattened at the top, as in *Planorbis bicarinatus*, but the lower funnel-shaped umbilicus is very similar.

Species 26. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS COSTULATUS. *Pla. testâ parvâ, compressissimâ, obliquè concentricè costulatâ, cæruleo-subviridi; anfractibus paucis, rapidè crescentibus, supernè lentè convexis, ultimo magno; aperturâ obliquè subovatâ, disco inferiori subplanulato.*

THE RIBBED PLANORBIS. Shell small, very compressed, obliquely concentrically ribbed, greenish blue; whorls few, rapidly increased, slightly convex above, last large; aperture obliquely rather oval; lower disc a little flattened.

KRAUSS. Sudafrikan. Mollusken. Tab. V. f. 8.

Hab. Natal.

Species 27. (Fig. *a*, *b*, Mus. —— ? Copied.)

PLANORBIS BENGALENSIS. *Pla. testâ compressâ, tenui, pallidè succineâ, lævi, supernè convexâ, infrà planulatâ, anfractibus tribus, apicalibus paulò depressis; umbilico basali parvo; aperturâ subtrigonâ.*

THE BENGAL PLANORBIS. Shell compressed, thin, pale amber, smooth, convex above, flattened below, whorls three, apical a little depressed, basal umbilicus small; aperture subtrigonal.

DUNKER. Index Molluscorum. Tab. II. f. 1–4.

Hab. Bengal.

This shell does not appear from Dunker's figure to have the chambered character of the *Segmentina* group, as shown in *Planorbis calathus*, which it somewhat resembles otherwise, although not nearly so tumid.

Species 28. (Mus. Sowerby.)

PLANORBIS AFFINIS. *Pla. testâ corneâ, tumidâ; spirâ concavâ, anfractibus quinis altiùsculis, prope suturam subangulatim elevatis, tum declivibus, infrà rotundatis, apicali obtecto; aperturâ majùsculâ, supernè depressâ.*

THE RELATED PLANORBIS. Shell horny, tumid; spire concave, whorls five, rather high, subangularly elevated near the suture, then sloped, rounded beneath, the apical one hidden; aperture rather large, depressed above.

ADAMS, C. B. Conchological Contributions, p. 44.

Hab. Jamaica.

More depressed and slight than *Planorbis corneus*, with the whorls beneath more deeply sunk in the umbilicus.

Species 29. (Mus. Brit. Sowb.)

PLANORBIS DECLIVIS. *Pla. testâ altâ, angustiùsculâ, corneâ vel subcastaneâ, tenuissimè liratâ; spirâ planiùsculâ, anfractibus angustis, ultimo magno, supernè angustè elevato, tum declivi, infrà rotundo, disco inferiori profundè concavo, anfractibus rotundis; aperturâ magnâ, auriformi, infrà valdè expanso, producto.*

THE SLOPED PLANORBIS. Shell raised, rather narrow, horny, or chestnut, very finely ridged; spire rather flat, whorls narrow, last large, narrowly raised above, then sloped, rounded below, lower disc deeply concave, whorls rounded, aperture large, ear-shaped, much expanded and produced below.

SOWERBY.

Hab. —— ?

Differing from *Planorbis corneus* in the narrowness and elevation of the whorls, and in the great expansion and production of the lower part of the mouth.

Species 30. (Fig. 1, *a*, *b*, Mus. Hanley.)

PLANORBIS CALATHUS. *Pla. testâ parvâ, dextrali, nitenti, succineâ, internè segmentatâ, extùs fasciis albis obliquè radiantibus ornatâ, supernè convexâ, infrà planulatâ, spirâ valdè contractâ; anfractibus tribus, ultimo magno, subconico, infrà acutè angulatô, angustè umbilicato.*

THE BASKET PLANORBIS. Shell small, dextral, shining, amber, divided by segments within, ornamented without by white rayed bands, convex above, flattened below; spire much contracted, whorls three; last large, somewhat conical, acutely angular, narrowly umbilicated.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. V. (1850), p. 349.

Hab. Moradabad, Kattiawar, Ceylon, Cashmere.

Belonging to the 'Segmentina' group.

Species 31. (Mus. Hanley.)

PLANORBIS EXUSTUS. *Pla. testâ subviridi, fusco, tenuiter liratâ, spirâ subplanulatâ, anfractibus tribus, ultimo maximo, aperturâ supernè subangulatim elevato, tum depresso, declivi, infrà expansâ, subproductâ, disco inferiori latè concavo.*

THE BURNT PLANORBIS. Shell greenish brown, finely ridged; spire rather flattened; whorls three, last large; aperture angularly raised, then depressed, sloped, expanded below, rather produced; lower disc broadly concave.

DESHAYES. Belanger's Voyage. Ind. Ori. Zool. p. 417.

Planorbis Indicus. Benson.

This appears quite distinct from *Planorbis coromandelicus* in form and surface.

Species 32. (Fig. *a*, *b*, Mus. —— ? Copied.)

PLANORBIS NATALIS. *Pla. compressâ, fumoso-fuscâ; spirâ subplanulatâ, anfractibus quaternis, rotundis; ultimo lato, medio prominenti; disco inferiori latè concavo; aperturâ compressâ, lateraliter elongatâ.*

THE NATAL PLANORBIS. Shell smoky brown; spire rather flat, whorls four, rounded; last broad, prominent in the middle; lower disc broadly concave, aperture compressed, laterally elongated.

KRAUSS. Sudafrikanischen Mollusken. Tab. V. f. 9.

Hab. Cape Natal, S. Africa.

Species 33. (Mus. —— ? Copied.)

PLANORBIS PFEIFFERI. *Pla. testâ olivaceâ, lævi, subcompressâ; spirâ subcomplanatâ, anfractibus tumidis, rotundis, supernè convexiùsculis, infrà angustatis; aperturâ rotundè subquadratâ; disco inferiori angustè umbilicato.*

PFEIFFER'S PLANORBIS. Shell olive, smooth, rather compressed; spire rather flattened, whorls tumid, rounded, convex above, narrow below; aperture roundly subquadrate; lower disc narrowly umbilicated.

KRAUSS. Sudafrikanischen Mollusken. Tab. V. f. 33.

Hab. Cape Natal, South Africa.

Species 34. (Mus. Brit.)

PLANORBIS COROMANDELICUS. *Pla. testâ altâ, castaneocorneâ, tenui, lævigatâ, irregulariter undatâ; spirâ contractâ, concavâ; anfractibus quaternis, supra suturam angulatim elevatis, perpendiculariter subcomplanatis; ultimo magno, ad aperturam expanso; aperturâ supra suturam elevato, tum declivi, infrà obliquè expansâ, productâ; disco inferiori concavo, anfractibus rotundis, apicali obtecto.*

THE COROMANDEL PLANORBIS. Shell high, chestnut-horny, smooth, irregularly undated; spire contracted, concave; whorls four, angularly raised above the suture, perpendicularly flattened, last large, expanded towards the aperture; aperture raised above the suture, then sloped, obliquely expanded, produced; lower disc concave, whorls rounded, apical one hidden.

KÜSTER, as of Fabricius.

Hab. Co. of Coromandel.

35.

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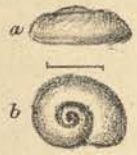

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38 b

38 c

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G.B. Sowerby del et Lith

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PLANORBIS.

PLATE V.

Species 35. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS SIBIRICUS. *Pla. testâ parvâ, tumidâ, dextrâ, rubescenti-corneâ; spirâ planulatâ, anfractibus tribus ad quaternos, tumidis, subrotundis; disco inferiori valdè concavo, anfractu apicali profundè obtecto; aperturâ obliquè subovatâ.*

THE SIBERIAN PLANORBIS. Shell small, tumid, dextral, reddish horn; spire flattened, whorls three to four, tumid, rather round; lower disc very concave, apical whorl deeply hidden; aperture obliquely subovate.

DUNKER. Proc. Zool. Soc. 1848, p. 42.

Hab. Siberia.

Species 36. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS STELZNERI. *Pla. testâ dextrâ, pallidissimè fulvâ, solidâ, compressâ, disco superiori complanato, inferiori ad marginem convexo, tùm angulato, planulato, medio latè umbilicato; anfractibus quinis, supernè convexiùsculis, supra medium subangulatis, tùm versus columellam inclinatis; aperturâ obliquè subovatâ.*

STELZNER'S PLANORBIS. Shell dextral, very pale fulvous, solid, compressed; upper disc flattened, lower convex at the margin, then angular, flattened, broadly umbilicated in the middle; whorls five, rather convex above, subangular above the middle, then sloped inwards towards the columella; aperture obliquely subovate.

DOHRN. Proc. Zool. Soc. 1858.

Hab. Ceylon.

Species 37. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS GILBERTI. *Pla. testâ subcompressâ, dextrali, tenui, ferè albâ; spirâ parvâ; anfractibus tribus; ultimo magno, tumido, supernè subconico, infra medium obtusè angulato; disco inferiori planulato, umbilicato; aperturâ angustâ, infra medium angulatâ.*

GILBERT'S PLANORBIS. Shell subcompressed, dextral, thin, almost white; spire small; whorls three, last large, tumid, rather conical above, obtusely angular below the middle; lower disc flattened, umbilicated; aperture narrow, angular below the middle.

DUNKER. Proc. Zool. Soc. 1848, 40.

Hab. East Australia.

Species 38. (Fig *a*, *b*, *c*, Mus. Brit.)

PLANORBIS EBURNEUS. *Pla. testâ altâ, tumidâ, undulatâ, lævi, albâ, medio anfractuum castaneâ fasciatâ; apice parvo, anfractibus tribus, supernè subplanulatis, tum declivibus, infrà inflatis, ultimo magno, alto, rapidè crescenti; disco inferiori convexo, anfractu apicali obtecto; aperturâ magnâ, supernè flexuosim depressâ, infrà inflatâ, productâ.*

THE IVORY PLANORBIS. Shell high, tumid, undulating, smooth, white, banded with chestnut in the middle of the whorls; apex small, whorls three, rather flattened above, then sloped, inflated below; last large, high, rapidly increased; lower disc convex, apical whorl hidden; aperture large, flexuously depressed above, inflated below, produced.

GRAY —— ? MS. Mus. Brit.

Hab. Ceylon.

Species 39. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS OBTUSUS. *Pla. testâ compressâ, subrugosâ, ferrugineâ, apice lato, planulato; anfractibus quinis, lentè crescentibus, convexiùsculis, supernè subdeclivibus, infrà obtusè angulatis, infra angulum planulatis; aperturâ obliquè subovatâ, infrà obtusè angulatâ.*

THE OBTUSE PLANORBIS. Shell compressed, rather rough, ferruginous, apex broad, flattened; whorls five, slowly increased, rather convex; rather sloped above, obtusely angular below, flattened below the angle; aperture obliquely subovate, obtusely angular below.

DESHAYES. Proc. Zool. Soc.

Hab. Adelaide.

Species 40. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS BRUNNEUS. *Pla. testâ subglobosâ, altâ, lævi, ferrugineâ, spirâ parvâ, infractibus tribus, supernè contractis, suprà suturam, elevatis, subangulatis, tum rotundis, medio inflatis; disco inferiori angustè umbilicato, aperturâ semilunari, infrà productâ, expansâ.*

THE BROWN PLANORBIS. Shell subglobose, high, smooth, ferruginous, spire small, whorls contracted above, raised, a little angular above the suture, then rounded, inflated in the middle; lower disc narrowly umbilicated; aperture semilunar, produced and expanded below.

GRAY. Adams. Genera.

Hab. Bombay.

Species 41. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS MACNABIANUS. *Pla. testâ tenuissimâ, pellucidâ, succineâ, utrinque planulatâ, compressissimâ; anfractibus septenis, lentissimè crescentibus, aperturâ subrhomboideâ; infrà angulatâ.*

MACNAB'S PLANORBIS. Shell very thin, pellucid, amber, flattened on both sides, very compressed; whorls seven, very slowly increased; aperture subrhomboidal, angular below.

ADAMS, C. B. Conchological Contributions, p. 42.

Hab. Jamaica.

Species 42. (Mus. Brit.)

PLANORBIS TÆNIATUS. *Pla. compressâ, dextrâ, pallidè corneâ; spirâ parvâ, anfractibus quaternis vel quinis, internis tribus angustissimis, ultimo tumido, latiusculo, utrinque rotundato; medio fasciato, aperturâ obliquè oblongâ.*

THE RIBAND PLANORBIS. Shell compressed, dextral, pale horny; spire small, whorls four or five, inner three very narrow; last tumid, rather broad, rounded on both sides, banded in the middle, aperture obliquely oblong.

MORELET. Adams. Genera.

Hab. Isle of Pines.

Species 43. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS STAGNICOLA. *Pla. testâ dextrali, complanatâ, olivaceâ, minutissimè liratâ, supernè convexiusculâ, anfractibus tribus, rapidè crescentibus, ultimo lato; aperturâ obliquè subovatâ; disco inferiori concavo, anfractibus conspicuis, planulatis.*

THE STILL-WATER PLANORBIS. Shell dextral, flattened, olive, very finely ridged; rather convex above; whorls three, quickly increasing, last broad; aperture obliquely subovate; lower disc concave, whorls conspicuous, flattened.

MORELET. ——? Adams. Gen. of Shells.

Hab. ——?

Very like *Planorbis albus* in form, but of a dark green colour, and finely wrinkled.

44.

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46.

47a

48.

49.

47b

50. a

50. b

51.

G.B.Sowerby del et Lith

Vincent Brooks Day & Son Imp

PLANORBIS.

PLATE VI.

Species 44. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS HINDSIANUS. *Pla. testâ parvâ, dextrali, compressâ, pallidè succineâ, supernè convexâ, infrà concavâ, lævi; spirâ parvâ, anfractibus tribus, duobus, apicalibus angustis, ultimo lato, rapidè crescenti; aperturâ latâ, perobliquâ.*

HINDS' PLANORBIS. Shell small, dextral, compressed, pale amber, convex above, concave below, smooth, spire small, whorls three, two apical narrow, last broad, rapidly enlarged; aperture broad, very oblique.

DUNKER. Proc. Zool. Soc. 1848, p. 41.

Hab. Puna Islands.

Species 45. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS CATILLUS. *Pla. testâ utrinque compressâ, parvâ, albâ, dextrali; spirâ compressâ, anfractibus quinis, angustis, lentè crescentibus, infrà angulatis; aperturâ obliquè subovatâ, angustiùsculâ, anticè productâ, margine inferiori subangulatâ.*

THE LITTLE DISH PLANORBIS. Shell compressed on both sides, small, white, dextral, spire compressed, whorls five, narrow, slowly increased, angular below; aperture obliquely subovate, rather narrow, anteriorly produced, lower margin rather angular.

ANTON. ——? Adams. Genera of Mollusca.

Hab. ——?

Species 46. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS SALLEANUS. *Pla. testâ tumidâ, dextrali, ferrugineâ, lævi ùsculâ; spirâ subcompressâ, angustâ; anfractibus quaternis, altis, supernè angustatis, infra medium inflatis; aperturâ subobliquè ovatâ, anticè subexpansâ; disco inferiori lato, umbilicato.*

SALLE'S PLANORBIS. Shell tumid, dextral, ferruginous, rather smooth; spire rather compressed, narrow; whorls four, raised, narrow above, inflated below the middle; aperture rather obliquely ovate; anteriorly rather expanded; lower disc broadly umbilicated.

DUNKER. Proc. Zool. Soc. 1853, p. 54.

Hab. St. Domingo.

Species 47. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS INFLATUS. *Pla. testâ magnâ, robustâ, altâ, lævigatâ, pallidè olivaceâ, infra medium intùsque castaneâ; spirâ parvâ, profundè concavâ; anfractibus quaternis, apicalibus tribus parvis, ultimo altissimo, supra suturam perelevato, rotundo, infra medium magis inflato; disco inferiori concavo, anfractu apicali obtecto; aperturâ subauriformi, altâ, margine inferiori subexpanso.*

THE INFLATED PLANORBIS. Shell large, robust, high, smooth, pale olive, chestnut below the middle and within; spire small, deeply concave; whorls four, three apical small, last very high, much raised above the middle, round, more inflated below the middle; lower disc concave, apical whorl hidden; aperture rather ear-shaped, lower margin a little expanded.

DUNKER. Proc. Zool. Soc. 1848, p. 40.

Hab. ——?

Species 48. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS CIRCUMLINEATUS. *Pla. testâ succineâ, subpellucidâ, tumidiùsculâ, dextrali, lævi; spirâ parvâ, anfractibus quaternis, rapidè crescentibus, ultimo lato, prope aperturam subexpanso, aperturâ obliquè subovatâ, angustiùsculâ, infrà paulò expansâ.*

THE CIRCUMLINEAR PLANORBIS. Shell amber, rather pellucid, rather tumid, dextral, smooth; spire small, whorls four, rapidly increasing, last broad, a little expanded near the aperture; aperture obliquely subovate, rather narrow; a little expanded below.

SHUTTLEWORTH. ——? MS. Mus. Brit.

Hab. Porto Rico.

Species 49. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS TERVERSANUS. *Pla. testâ tumidâ, pallidissimè corneâ, lævigatâ; spirâ parvâ, planulatâ, anfractibus tribus, ultimo tumido, supra suturam rotundè elevato; aperturâ obliquâ, angustâ, supernè subdilatatâ; disco inferiori concavo.*

THE THREE-TURNED PLANORBIS. Shell tumid, very pale horn, smooth; spire small, flattened; whorls three, last tumid, roundly elevated above the suture; aperture oblique, narrow, rather dilated above; lower disc concave.

D'ORBIGNY. ——? MS. Coll. Cum. in Brit. Mus.

Hab. St. Thomas, West Indies.

Species 50. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS ANDECOLUS. *Pla. testâ albâ, altâ, dextrali; spirâ subcomplanatâ, anfractibus tribus, convexis; ultimo maximo, altissimo versus marginem superiorem et paulò supra medium, angulato infrà, ad marginem inferiorem subcarinato, post carinam latè et profundè umbilicato; aperturâ paulò depressâ, trigonâ, anticè productâ, acuminatâ, supernè latâ, subdepressâ.*

THE PLANORBIS OF THE ANDES. Shell white, high, dextral; spire rather flattened; whorls three, convex; last very large, very high, angular near the upper margin and a little above the middle, slightly keeled at the lower margin, broadly and deeply umbilicated behind the keel; aperture a little depressed, trigonal, anteriorly produced, acuminated, broad, rather depressed above.

D'ORBIGNY. Voyage dans l'Amérique Méridionale, Pl. XLV.

Hab. South America.

Species 51. (Mus. Brit.)

PLANORBIS TENAGOPHILUS. *Pla. testâ, compressâ, solidâ, griseo-fulvâ; utrinque concavâ; apice umbilicato; anfractibus quinque, supra suturam angulatis; ultimo magno, supernè declivi, infrà subventricosâ, disco inferiori lato, versus marginem complanato, medio (haud profundè) umbilicato.*

THE SHALLOW-WATER PLANORBIS. Shell broad, compressed, solid, fulvous-gray; concave on each side; apex umbilicated; whorls five, angular above the suture, last large, sloped above, somewhat ventricose below, lower disc broad, flattened towards the margin, umbilicated (not deeply) in the middle.

D'ORBIGNY. Voy. Amér. Meridionale, Pl. XLV., f. 17–20.

Hab. South America.

The funnel-shaped umbilicus on the spire is narrower and more decidedly angular than in *Planorbis commutatus*.

52.

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54.

55.a

56.

57b

55b

58.a

58.b

59

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PLANORBIS.

PLATE VII.

Species 52. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS KERMATOIDES. *Pla. testâ subcompressâ, albidiâ, suprà truncato-conicâ, infrà planulatâ, carinatâ, ad medium umbilico infundibuliformi excavato; spirâ depressâ, anfractibus quaternis, ultimo magno.*

THE SHEAR-SHAPED PLANORBIS. Shell a little compressed, whitish, truncato-conical above, flattened below, keeled, hollowed in the middle, with a funnel-shaped umbilicus; spire depressed, whorls four, last large.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLV., f. 1–4.

Hab. S. America.

Species 53. (Mus. Brit.)

PLANORBIS LUCIDUS. *Pla. testâ compressâ, semipellucidâ, lævi, obscurè castaneo-corneâ; spirâ depressâ, anfractibus quinis subplanulatis, ultimo convexo, infra medium subangulato; disco inferiori concavo, angustiùsculo, aperturâ subquadratâ, infrà latiùsculâ.*

THE LUCID PLANORBIS. Shell compressed, semipellucid, smooth, chestnut-horn; spire depressed, whorls five, rather flat, last convex, rather angular below the middle; lower disc concave, rather narrow, aperture rather square, rather broad below.

PHILIPPI —— ? MS. Brit. Mus.

Hab. —— ?

Species 54. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS SEPTEMGYRATUS. *Pla. testâ valdè depressâ, utrinque concavâ, fusco-subviridi, anfractibus septenis, angustissimis, ultimo angusto, aperturâ parvâ, obliquè ovatâ.*

THE SEVEN-WHORLED PLANORBIS. Shell much depressed, concave on both sides, brownish-green, whorls seven, very narrow, last narrow; aperture small, obliquely ovate.

ZEIGLER —— ? MS. Brit. Mus.

Hab. Vienna.

A remarkably thin, wafer-like shell.

Species 55. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS BECKIANUS. *Pla. testâ tumidâ, sinistrâ, lævigatâ, corneâ, medio anfractuum et infrà castaneâ, spirâ depressâ, anfractibus quaternis, supra suturam elevatis, rotundis, ultimo maximo, ventricoso, rotundo, infrà latiùsculo, aperturâ magnâ; disco inferiori profundè excavato, anfractu apicali obtecto.*

BECK'S PLANORBIS. Shell tumid, sinistral, smooth, horn, chestnut at the middle of the whorls and below; spire depressed, whorls four, raised above suture, rounded, last large, ventricose, rounded, rather broad below; aperture large, lower disc deeply excavated, apical whorl hidden.

DUNKER —— ? Ad. Gen. of Sh.

Hab. —— ?

Little differing from *Planorbis corneus*, but with the whorls more uniformly rounded than in that somewhat variable species.

Species 56. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS PALLIDUS. *Pla. testâ tumidiùsculâ, lævi, pallidè corneâ, utrinque subcomplanatâ; spirâ angustatâ, anfractibus quaternis, rapidè crescentibus, ultimo latiùsculo, supernè declivi, infra medium inflato, disco inferiori subcomplanato; aperturâ obliquè subovatâ, margine superiori sinuatim producto, depresso.*

THE PALE PLANORBIS. Shell rather tumid, smooth, pale horn, flattened on each side; spire narrow, whorls four, quickly increasing, last rather broad, sloped above, inflated below the middle; lower disc a little flattened; aperture obliquely subovate, lower margin sinuously produced, depressed.

C. B. Adams. Basl. Proc. Nat. Hist. Vol. II. p. 102.

Hab. Jamaica.

Species 57. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS CHILENSIS. *Pla. testâ tumidiùsculâ, albâ, supernè complanatâ; infrà concavâ; anfractibus quinis, mediocriter crescentibus, ultimo tumido; aperturâ magnâ, subquadratâ, margine inferiori rectiùsculo.*

THE CHILI PLANORBIS. Shell rather tumid, white, flattened above, concave below; whorls five, moderately increased, last tumid; aperture large, rather square, lower margin rather straight.

ANTON —— ? MS. Brit. Mus.

Hab. Chili.

Species 58. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS LANIERANUS. *Pla. testâ depressâ, corneo-castaneâ, translucidâ, lævigatâ; spirâ compressâ, parvâ; anfractibus quaternis, ultimo supernè latiùsculo, infrà angustiori, aperturâ angulatâ.*

LANIER'S PLANORBIS. Shell depressed, horny chestnut, translucid, smooth; spire compressed, small; whorls four, last rather broad above, rather narrower below.

D'ORBIGNY. Moll. Cuba.

Hab. Isl. Cuba.

Species 59. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS ROSSMÄSLERI. *Pla. testâ parvâ, compressâ, ferrugineâ; spirâ subcomplanatâ, anfractibus quaternis, rapidè crescentibus, rotundis; disco inferiori umbilicato; aperturâ obliquè ovatâ.*

ROSSMÄSLER'S PLANORBIS. Shell small, compressed, ferruginous; spire rather flattened, whorls four, quickly increased, rounded; lower disc umbilicated; aperture obliquely ovate.

SCHMIDT —— ? Adams, Genera of Shells.

Hab. Anerswald, near Leipsic.

61.

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62.

63.a

64.

63.b

65.

66.

68.

67.

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PLANORBIS.

PLATE VIII.

Species 60. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS SPENCERI. *Pla. testâ parvâ, flavido-fuscâ, subdepressâ, sinistrali, lævigatâ; spirâ complanatâ, parvâ, anfractibus quaternis, ultimo latiùsculo, supernè convexiùsculo, ad marginem obscurissimè angulato, infra angulum angustatâ; disco inferiori excavato; aperturâ semilunari.*

SPENCER'S PLANORBIS. Shell small, yellowish-brown, subdepressed, sinistral, smooth; spire flattened, small, whorls four, last rather broad, rather convex above, very obscurely angular at the margin, narrowed below; lower disc excavated; aperture semilunar.

ALLEN ——? MS. Brit. Mus.

Hab. Portugal.

Species 61. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS NITIDULUS. *Pla. testâ tenui, pellucidâ, pallidissimè corneâ, tumidiùsculâ; spirâ planiùsculâ, medio excavatâ, angustâ, anfractibus quaternis, utrinque tumidiùsculis; disco inferiori excavato; aperturâ supernè lato, infrà angustato.*

THE NEAT LITTLE PLANORBIS. Shell thin, pellucid, very pale horn, rather tumid; spire rather flat, a little excavated in the middle, narrow; whorls four, rather tumid on each side; lower disc excavated; aperture broad above, narrow below.

DUNKER. Proc. Zool. Soc. 1848, p. 40.

Hab. Malacca.

Species 62. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS UNGULATUS. *Pla. testâ latâ, depressâ, arcuatâ, corneo-rubescenti; spirâ vix convexâ, anfractibus septenis, lentè crescentibus, supernè angulatis, subcarinatis; disco inferiori convexo; aperturâ obliquâ, supernè acutè angulatâ, productâ.*

THE TALONED PLANORBIS. Shell broad, depressed, arched, reddish-horny, spire hardly convex; whorls seven, slowly increased, angular above, somewhat keeled, lower disc convex; aperture oblique, sharply angular above, produced.

CHITTY ——? MS. Brit. Mus.

Hab. Jamaica.

The sharp prominent angle in the margin of the whorls, with the slightly arched under surface, gives the profile of this shell a talon-like appearance.

Species 63. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS COMMUTATUS. *Pla. testâ sinistrali, tumidâ, ventricosâ, pallidè fuscâ, tenui; spirâ infundibulatâ; anfractibus quinis, angulatis, supernè angustatis, infrà ventricosis, rotundis; disco inferiori profundè umbilicato, anfractu apicali obtecto; aperturâ rotundo-subtrigonâ.*

THE CHANGED PLANORBIS. Shell sinistral, tumid, ventricose, pale brown; spire funnelled, whorls five, angular, narrow, ventricose, rounded below; lower disc deeply umbilicated, apical whorl hidden; aperture roundly subtrigonal.

DUNKER ——? MS. Brit. Mus.

Hab. N. America.

Species 64. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS ARCTICUS. *Pla. testâ parvâ, pallidè fulvâ, subdepressâ; spirâ parvâ, paulò excavatâ; anfractibus tribus, rotundis, rapidè crescentibus, tumidiùsculis, disco inferiori latè umbilicato, aperturâ rotundâ.*

THE ARCTIC PLANORBIS. Shell small, pale fulvous, rather depressed; spire small, a little excavated; whorls three, rounded, quickly increasing, rather tumid, lower disc broadly umbilicated; aperture rounded.

BECK ——? MS. Mus. Brit.

Hab. Greenland.

Species 65. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS GRACILENTUS. *Pla. testâ dextrali, albidâ, opacâ; spirâ planiùsculâ; anfractibus quinis, apicalibus angustis, externis latiùsculis, ad aperturam subdilatatis; aperturâ subtrigonâ; disco inferiori latè umbilicato.*

THE SLENDER PLANORBIS. Shell dextral, whitish, opaque; spire rather flat; whorls five, apical narrow, external rather broad; a little dilated at the aperture; aperture a little trigonal; lower disc broadly umbilicated.

GOULD —— ? MS. Brit. Mus.

Hab. Colorado Desert.

Species 66. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS DEPRESSISSIMUS. *Pla. testâ complanatâ, valdè depressâ, pellucidâ, pallidè corneâ, spirâ complanatâ; anfractibus septenis, tenuibus, lentè crescentibus, supernè ad marginem acutè angulatis; disco inferiori planulato; aperturâ lateraliter elongatâ, angulo externo acuto.*

THE VERY FLAT PLANORBIS. Shell flattened, much depressed, pellucid, pale horn, spire flattened; whorls seven, thin, slowly increased, at the margin above sharply angular; lower disc flattened; aperture laterally lengthened, outer angle sharp.

MORICAND —— ? MS. Mus. Brit.

Hab. —— ?

The whorls are perhaps the flattest of any in the genus.

Species 67. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS SUBANGULATUS. *Pla. testâ pallidè corneâ, tumidiùsculâ, sinistrali; anfractibus tribus, rapidè crescentibus, supernè convexis, latiùsculis; disco superiori lato, convexo; inferiori subangulato, excavato; aperturâ supernè lateraliter productâ, infrà versus medium inclinato.*

THE SUBANGULAR PLANORBIS. Shell pale, horny, rather tumid, sinistral whorls three, quickly increased; convex, rather broad; upper disc broad, convex, lower rather angular, excavated; aperture laterally produced above, inclined towards the middle below.

PHILIPPI. Encycl. 2, Pl. XXI., f. 6.

Hab. Malta, Sicily.

Species 68. (Mus. Brit.)

PLANORBIS SERICEUS. *Pla. testâ sinistrali, tumidiùsculâ, pallidè fuscâ, spirâ angustè infundibulatâ; anfractibus quinis, supernè angulatis, angustatis; disco inferiori excavato, anfractibus rotundis; aperturâ subtrigonâ, infrà expansâ, rotundâ.*

THE CHICORY PLANORBIS. Shell sinistral, rather tumid, pale brown, spire narrowly funnelled; whorls five, angular above, narrow; lower disc excavated, whorls rounded; aperture subtrigonal, expanded, rounded below.

DUNKER. Proc. Zool. Soc. 1848, 42.

Hab. —— ?

Differing from *Planorbis commutatus* in the proportionate narrowness of the whorls, and the funnel-shaped excavation is more angular, distinct, and narrow.

69.

70.

71.

72.a

73.a

73.b

72.b

72.c

b 74. a

76.

a b.

75.

G.B. Sowerby del et Lith

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PLANORBIS.

PLATE IX.

Species 69. (Mus. Brit.)

PLANORBIS ELEGANTULUS. *Pla. testâ obliquè compressâ, pellucidâ, corneâ, dextrali, tenuiter striatâ, supernè convexâ, infrà concavâ; spirâ parvâ, anfractibus tribus, ultimo lato, ad aperturam obliquè expanso; aperturâ perobliquè ovatâ.*

THE ELEGANT PLANORBIS. Shell obliquely compressed, transparent, horny, dextral, finely striated, convex above, concave below; spire small, whorls three, last wide, obliquely expanded at the aperture; aperture very obliquely ovate.

DOHRN. Proc. Zool. Soc. 1858, p. 134.

Hab. ——?

Species 70. (Mus. Hanley.)

PLANORBIS TROCHOIDEUS. *Pla. testâ tumidiùsculâ, tenui, semipellucidâ, subviridi, distanter concentricè albofasciatâ, supernè convexâ, infrà subcomplanatâ, angustissimè umbilicatâ, internè segmentatâ; spirâ angustissimâ, ultimo anfractu supernè latè expanso; infra medium angulato, acutè carinato.*

THE TROCHIFORM PLANORBIS. Shell rather tumid, thin, semipellucid, rather green, distantly concentrically banded with white, convex above, rather flattened below, very narrowly umbilicated, internally divided in segments; spire very narrow, last whorl broadly expanded above; angular below the middle, acutely keeled.

BENSON. Asiatic Society Bengal, 1836, p. 742.

Hab. Barrackpore.

Remarkable for the way in which the outer whorl covers the inner, and the very small opening left in the centre of the upper and under discs.

Species 71. (Mus. Brit.)

PLANORBIS MORICANDI. *Pla. testâ sinistrali, tumidâ, ferrugineâ; spirâ angustè infundibulatâ, anfractibus supra suturam angulatim elevatis; ultimo latè declivi; aperturâ trigonâ, infra medium subangulatâ, infrà subrotundâ; disco inferiori umbilicato.*

MORICAND'S PLANORBIS. Shell sinistral, tumid, ferruginous; spire narrow, with narrow funnel-shaped cavity, whorls raised angularly above the suture, last broadly sloped; aperture trigonal, rather angular below the middle, a little rounded underneath; lower disc umbilicated.

BECK. Adams, Genera of Shells.

Hab. ——?

A narrower shell than *Planorbis tenagophilus*, with the funnel-shaped opening more narrow and angular.

Species 72. (Fig. *a*, *b*, *c*, Mus. Brit.)

PLANORBIS MULTIVALVIS. *Pla. testâ corneâ, sinistrali, altâ; spirâ exsertâ, subturritâ; anfractibus septenis, supernè angustatis angulatis, ultimo compresso, alto, propè aperturam contracto tum tumido, ad aperturam expanso; aperturâ elevatâ, margine expanso; disco inferiori profundè umbilicato; anfractibus rotundis, tribus apicalibus obtectis.*

THE MANY-WHORLED PLANORBIS. Shell horny, sinistral, high, spire exserted, subturreted; whorls seven, narrow and angular above, last compressed, deep, contracted near the aperture, then tumid, expanded at the aperture; aperture raised, margin expanded, lower disc deeply umbilicated; whorls rounded, three apical hidden.

CASE. Adams, Genera of Shells.

Hab. Lake Superior, Michigan.

In the contraction and swelling of the last whorl near the mouth, and expansion of the lip, this shell resembles *Planorbis campanulatus*, but the whorls of the spire are more numerous and are pushed out conically.

Species 73. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS FERRUGINEUS. *Pla. testâ tumidâ, ventricosâ, sinistrali, castaneo-corneâ; spirâ concavâ, anfractibus senis, subangulatis, supra suturam elevatis, infra angulum subdeclivibus, ultimo lato, infrà subconvexâ; aperturâ obliquè subtrigonâ; disco inferiori latè concavo; anfractibus subrotundis.*

THE FERRUGINOUS PLANORBIS. Shell tumid, ventricose, sinistral, chestnut horn, spire concave; whorls six, rather angular, raised above the suture, rather sloped below the angle, last broad, rather convex below; aperture obliquely subtrigonal; lower disc broadly concave, whorls somewhat rounded.

SPIX. Test. Braz. Tab. XVIII., f. 1–2.

Hab. Brazil.

The whorls are more angular above than is the case in *Planorbis olivaceus.*

Species 74. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS FUSCUS. *Pla. testâ dextrali, depressâ, ferrugineâ, supernè convexiùsculâ, infrà latè excavatâ; spirâ angustâ; anfractibus tribus, ultimo lato; aperturâ obliquè angustatâ, margine integro.*

THE BROWN PLANORBIS. Shell dextral, depressed, iron-rust, rather convex above, broadly excavated below, spire narrow; whorls three, last broad; aperture obliquely narrow, margin entire.

DUNKER. Proc. Zool. Soc. 1848, p. 42.

Hab. Valparaiso.

Species 75. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS NANUS. *Pla. testâ pallidè fulvâ, dextrali, compressâ, supernè convexiùsculâ, infrà latè et profundè umbilicatâ; spirâ angustâ, complanatâ; anfractibus tribus, obliquè striatis, rapidè crescentibus, ultimo latissimo; aperturâ depressâ, latissimâ, labio externo supernè obliquè producto.*

THE DWARF PLANORBIS. Shell pale fulvous, dextral, compressed, rather convex above, broadly and deeply umbilicated below; spire narrow, flat; whorls three, obliquely striated, rapidly increased, last very broad; aperture depressed, very broad, outer lip obliquely produced above.

BENSON. Proc. Zool. Soc. 1856, p. 186.

Hab. India.

Species 76. (Mus. Brit.)

PLANORBIS MODICUS. *Pla. testâ corneâ, tumidâ, sinistrali, spirâ infundibulatâ; anfractibus quinis, propè suturam elevatis et angulatis, ultimo lato, declivi, concentricè tenuiter rugatâ; aperturâ subtrigonâ, disco inferiori concavo, anfractibus subplanulatis.*

THE MIDDLING PLANORBIS. Shell horny, tumid, sinistral, spire funnel-shaped; whorls five, raised and angular near the suture, last broad, sloped, concentrically finely wrinkled; aperture subtrigonal, lower disc concave, whorls rather flat.

BENSON. Adams, Genera of Mollusca.

Hab. India.

Belonging to the same group as *Planorbis corneus*, but smaller, with narrow, angular, funnel-like spiral excavation.

78.

77.

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80. *a*

81.

4 *b*.

80 *b*

82.

83.

84.

G.B. Sowerby del et Lith

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PLANORBIS.

PLATE X.

Species 77. (Fig. *a*, *b*, Mus. Hanley.)

PLANORBIS UMBILICALIS. *Pla. testâ dextrali, segmentatâ, fuscâ, tenui, nitenti, lævigatâ, supernè tumido, infrà planiùsculo, infra medium carinatâ; spirâ angustâ, planatâ; anfractibus tribus, ultimo magno, lato, supra carinam tumido; aperturâ obliquè lato, margine superiori sinuatim producto, disco inferiori medio angustè umbilicato.*

THE UMBILICAL PLANORBIS. Shell dextral, divided in segments, brown, thin, shining, smooth, tumid above, rather flat below, keeled below the middle; spire narrow, flat; whorls three, last large, broad, tumid above the middle; aperture obliquely broad, upper margin sinuously produced, lower disc narrowly umbilicated in the middle.

BENSON. Journ. Asi. Soc. Bengal, Vol. V. p. 741.

Hab. East Bengal.

Species 78. (Fig. *a*, *b*, Mus. Hanley.)

PLANORBIS CŒNOSUS. *Pla. testâ dextrali, segmentatâ, pallidè subviridi, lævigatâ, supernè truncato-conicâ, infrà subplanulatâ, medio angustè umbilicatâ; spirâ angustissimâ, ultimo anfractu latissimo, infra medium acutè carinato; aperturâ trigonâ, margine suprà infràque flexuosim depresso.*

THE MIRY PLANORBIS. Shell dextral, divided in segments, greenish, smooth, truncated-conical above, rather flat below, narrowly umbilicated in the middle; spire very narrow, sharply keeled below the middle; aperture trigonal, margin flexuously depressed above and below.

BENSON. Ann. Nat. Hist. 1850, p. 349.

Hab. Near Moradabad, Ceylon.

Species 79. (Fig. *a*, *b*, Mus. Hanley.)

PLANORBIS CANTORI. *Pla. testâ sordidè subviridi, dextrali, segmentatâ, supernè tumidâ, infrà convexiùsculâ, medio umbilicatâ; spirâ latiùsculâ, ultimo anfractu lato, infra medium obtusè carinato; aperturâ subtrigonâ, margine supernè flexuosim producto.*

CANTOR'S PLANORBIS. Shell dull greenish, dextral, divided in segments, tumid above, convex below, umbilicated in the middle; spire rather broad, last whorl broad, obtusely keeled below the middle; aperture rather trigonal, upper margin flexuously produced.

BENSON. Ann. Nat. Hist. 1850, p. 349.

Hab. Barrackpore, India.

Species 80. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS PONSONBYI. *Pla. testâ dextrali, altissimâ, ventricosâ, albâ, epidermide tenui pallidè flavidâ indutâ, supernè subconicâ, infrà latè et profundè umbilicatâ; spirâ subturritâ; anfractibus duobus, brevibus, subangulatis, ultimo anfractu supernè planulato, marginibus superiori inferiorique carinatis; aperturâ latâ, subtrigonâ, infrà acuminatâ, supernè expansâ.*

PONSONBY'S PLANORBIS. Shell dextral, very high, ventricose, white, covered with a yellowish thin epidermis, a little conical above, broadly and deeply umbilicated below; spire subturreted; whorls two, short, rather angular, last whorl flattened above, upper and lower margin keeled; aperture broad, rather trigonal, acuminated below, expanded above.

SMITH. (*Carinifex.*) Proc. Zool. Soc. 1875, No. 2.

Hab. California.

In *Planorbis bicarinata* and *Pl. aurita*, the spire is sunk, and not, as in this species, exserted. Otherwise, the two former much resemble the latter. I cannot see any reason for separating these shells generically. At least one very different species has an exserted spire.

Species 81. (Mus. Brit.)

PLANORBIS NEWBERRYI. *Pla. testâ dextrali, altissimâ, ventricosâ, corneâ, epidermide tenui indutâ, infrà*

latè et profundè infundibulatâ; spirâ exsertâ; anfractibus duobus, subangulatis, ultimo anfractu magno, ventricoso, supernè infernèque crenulatim carinato, medio obscurè carinato; aperturâ trigonâ, ferè ad medium ultimi anfractus depressâ, supernè angulatâ, infra angulum productâ, infra medium angustatâ, acuminatâ.

NEWBERRY'S PLANORBIS. Shell dextral, very high, ventricose, horny, covered with a pale thin epidermis, with a deep and wide funnel-shaped cavity below; spire exserted; whorls two, rather angular, last whorl large, ventricose, crenulately keeled above and below, obscurely keeled in the middle; aperture trigonal, depressed almost to the middle of the last whorl, angular above, produced below the angle, narrow and acuminated below the middle.

LEE. Proc. Acad. Phil. 1854, p. 51.

Genus, *Carinifex*, Binney.

Hab. California.

Species 82. (Mus. Sowerby.)

PLANORBIS OBESUS. *Pla. testâ tumidâ, altâ, sinistrali, castaneo-subviridi, tenui, inflatâ; spirâ angustiùsculâ, angulatim concavâ; anfractu ultimo magno, supernè angulato, infernè rotundo; aperturâ semicirculari, disco inferiori medio concavo, anfractibus apicalibus obtectis.*

THE FAT PLANORBIS. Shell tumid, high, sinistral, greenish chestnut, thin, inflated; spire rather narrow, angularly concave; last whorl large, angular above, rounded below; aperture semicircular, lower disc concave in the middle, apical whorls hidden.

DUNKER. Proc. Zool. Soc. 1848, p. 41.

Hab. ——?

Species 83. (Mus. Sowerby.)

PLANORBIS LENTUS. *Pla. testâ fusco-subviridi, medio anfractuum subcœruleâ, sinistrali, tumidâ, altâ; spirâ depressâ; anfractibus planiùsculis, prope suturam obscurè carinatis, ultimo concentricè lirato, tenuiter spiraliter striatâ; disco inferiori excavato, anfractu apicali obtecto; aperturâ magnâ, ad anfractum ultimum contractâ, paulò elevatâ; intùs fumoso-fuscâ, margine incrassato, flexuoso, albo.*

THE SLACK PLANORBIS. Shell greenish-brown, bluish in the middle of the whorls, sinistral, tumid, high; spire depressed; whorls rather flat, obscurely keeled near the suture, last concentrically ridged, finely spirally striated, lower disc hollow, apical whorl hidden; aperture large, contracted at the last whorl, a little raised, smoky-brown within, margin thickened, white.

SAY. Albers, Monograph. Planorbis, Pl. III. f. 4–6.

Hab. S. Carolina.

More tumid and deep, and less sloped at the top of the whorls than *Planorbis trivolvis*.

Species 84. (Mus. Brit.)

PLANORBIS PEREGRINUS. *Pla. testâ subcompressâ, dextrali, pallidissimè corneâ; obliquè striatâ; spirâ angustiùsculo, medio subexcavato; ultimo anfractu lato, tumido, supra medium obscurissimè angulato; disco inferiori angulatim umbilicato; aperturâ subquadrangulatâ.*

THE WANDERING PLANORBIS. Shell subcompressed, dextral, very pale horn, obliquely striated; spire rather narrow, slightly excavated in the middle; last whorl broad, tumid, very obscurely angular above the middle, lower disc angularly umbilicated; aperture slightly quadrangular.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLIV. f. 13–16.

Hab. Bahia.

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PLANORBIS.

PLATE XI.

Species 85. (Mus. Sowerby.)

PLANORBIS MERGUIENSIS. *Pla. testâ fuscâ, concentricè tenuiter striatâ, tumidâ, angustâ, altâ, sinistrali; spirâ parvâ, infundibulatâ; anfractibus apicalibus angustis, ultimo supernè angulato, supra suturam elevato; medio et infrà rotundato; aperturâ semilunari, supra anfractum ultimum elevatâ, intùs castaneo, margine subexpanso, intùs incrassato.*

THE MERGUI PLANORBIS. Shell brown, concentrically finely striated, tumid, narrow, high, sinistral; spire small, funnelled; apical whorls narrow, last angular above, raised above the suture; rounded in the middle and below; aperture semilunar, raised above the last whorl, chestnut within, margin a little expanded, thickened within.

PHILIPPI. —— ? Hanley, Indian Shells.

Hab. Mergui, Burmah.

Species 86. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS CONCAVUS. *Pla. testâ parvâ, albâ, depressâ, dextrali, lævigatâ; spirâ planiùsculâ, anfractibus quaternis, rapidè crescentibus, supernè infernèque rotundatis; aperturâ obliquè rotundâ, magnâ; disco inferiori excavato.*

THE CONCAVE PLANORBIS. Shell small, white, depressed, dextral, smooth; spire rather flat, whorls four, quickly increased, rounded above and below; aperture obliquely rounded, large; lower disc hollow.

ANTHONY. —— ? MS. Mus. Brit.

Hab. River Ohio.

Species 87. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS PARVUS. *Pla. testâ depressâ, complanatâ, semipellucidâ, subviridè fuscâ, dextrali; spirâ latâ, subcomplanatâ; anfractibus quaternis, supernè convexiùsculis, infernè rotundatis; ultimo latiùsculo; aperturâ obliquè subovatâ, depressâ; disco inferiori concavo.*

THE SMALL PLANORBIS. Shell depressed, flat, semipellucid, greenish brown, dextral; spire broad, flattened; whorls four, convex above, rounded below; last rather broad; aperture obliquely subovate, depressed; lower disc concave.

SAY. Alb. Monog. Pl. IV. f. 19, 20.

Planorbis fallax. Say (?)

Hab. New York.

Species 88. (Mus. Brit.)

PLANORBIS DEFLEXUS. *Pla. testâ depressâ, pallidè corneâ, lævigatâ, dextrali; spirâ angustâ, depressâ, anfractibus tribus, supernè convexis, infernè rotundis, rapidè crescentibus, ultimo lato; aperturâ magnâ, validè deflexâ.*

THE DOWN-BENT PLANORBIS. Shell depressed, pale horn, smooth, dextral; spire narrow, depressed, whorls three, convex above, rounded below, rapidly increased, last broad; aperture large, strongly deflected.

SAY. Long's Expedition, Appendix, Pl. XV. f. 8.

Planorbis virens. Adams.

Hab. River Ohio.

Species 89. (Mus. Brit.)

PLANORBIS ORIENTALIS. *Pla. testâ tenui, irregulariter undulatâ, flavidè albidâ, sinistrali; spirâ angustâ, depressâ; anfractibus supra suturam paulò elevatis, ultimo lato, declivi, versus aperturam expanso; aperturâ suprà infràque compressâ, magnâ, obliquè deflexâ; margine sinuato; disco inferiori concavo.*

THE ORIENTAL PLANORBIS. Shell thin, irregularly undulated, yellowish white, sinistral; spire narrow, depressed; whorls a little raised above the suture; last broad, sloped, expanded towards the aperture; aperture compressed above and below, large, obliquely deflected; margin sinuous; lower disc concave.

LAMARCK. Anim. s. Vert.

Hab. India.

Species 90. (Mus. Brit.)

PLANORBIS STRAMINEUS. *Pla. testâ tumidâ, depressâ, dextrali, stramineâ; spirâ complanatâ, medio subdepressâ, anfractibus quaternis, supernè planulatis, medio ventricosis, infrà rotundis; disco inferiori excavato, anfractu apicali obtecto.*

THE STRAW-COLOURED PLANORBIS. Shell tumid, depressed, dextral, straw-coloured; spire flattened, middle rather depressed, whorls four, flattened above, ventricose in the middle, rounded below; lower disc excavated, apical whorl hidden.

DUNKER. Proc. Zool. Soc. 1848, p. 42.

Hab. —— ?

Species 91. (Mus. Brit.)

PLANORBIS GLABRATUS. *Pla. testâ sinistrali, pulvocorneâ, tumidâ, subdepressâ, lævigatâ; spirâ angustâ, depressâ, anfractibus angustè supra suturam elevatis; ultimo lato, supernè declivi; aperturâ magnâ, margine inferiori producto; disco inferiori medio excavato.*

THE POLISHED PLANORBIS. Shell sinistral, fulvous-horny, tumid, somewhat depressed, smooth; spire narrow, depressed; whorls narrowly raised above the suture; last broad, sloped above; aperture large, lower margin produced, and lower disc hollowed in the middle.

SAY. Adams' Genera of Mollusca.

Hab. Florida.

Species 92. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS ANTIGUENSIS. *Pla. testâ latâ, compressâ, lævigatâ, fusco-corneâ, sinistrali; spirâ depressâ, anfractibus quinis, compressis, rotundis, prope marginem supra suturam elevatis, rapidè crescentibus; ultimo latiùsculo; aperturâ magnâ, elevatâ, subtrigonâ; disco inferiori concavo.*

THE ANTIGUA PLANORBIS. Shell broad, compressed, smooth, brown-horny, sinistral; spire depressed, whorls five, compressed, rounded, raised near the margin above the suture, quickly increased; last broad; aperture large, raised, rather trigonal; lower disc concave.

GUILDING. —— ?

Hab. Antigua, West Indies.

Species 93. (Fig. *a*, *b*, Mus. Hanley.)

PLANORBIS CONVEXIÙSCULUS. *Pla. testâ subcomplanatâ, albâ, tumidiùsculâ, lævigatâ, dextrali; anfractibus quaternis, rapidè crescentibus; ultimo lato, versus aperturam expanso; aperturâ obliquè subovatâ, supra ultimum anfractum elevato; disco inferiori excavato.*

THE RATHER CONVEX PLANORBIS. Shell rather flattened, white, rather tumid, smooth, dextral; whorls four, rapidly increased; last broad, expanded towards the aperture; aperture obliquely subovate, raised above the last whorl; lower disc excavated.

HUTTON. Journ. Asiat. Soc. Beng. 1849, Vol. XVIII. p. 652.

Hab. Affghanistan.

Species 94. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS EXACUTUS. *Pla. testâ depressâ, fusco-corneâ, dextrali, supernè convexâ, infernè planiùsculâ, paulò infra medium acutè carinatâ; aperturâ compressâ, lateraliter obliquè elongatâ, margine externo acuminatâ; disco inferiori subcomplanatâ, medio umbilicato.*

THE SHARP PLANORBIS. Shell depressed, brown-horny, dextral, convex above, rather flat below, sharply keeled a little below the middle; aperture compressed, laterally obliquely elongated, outer margin acuminated; lower disc rather flat, umbilicated in the middle.

SAY. Journ. Amer. Journ. Soc. Phil.

Planorbis Indicus. Benson.

Hab. United States.

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PLANORBIS.

PLATE XII.

Species 95. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS PANAMENSIS. *Pla. testâ parvâ, albidâ, compressâ, semipellucidâ, dextrali; spirâ parvâ; anfractibus tribus, depresso-convexis, distinctis, rapidè crescentibus; ultimo lato; disco inferiori concavo, anfractibus rotundis; aperturâ subovatâ.*

THE PANAMA PLANORBIS. Shell small, whitish, compressed, semipellucid, dextral; spire small; whorls three, depressed-convex, distinct, quickly increased; last broad; lower disc concave, anfractibus rotundis, aperture subovate.

D'ORBIGNY. Proc. Zool. Soc. 1848, p. 41.

Hab. Panama.

Resembling *Planorbis albus*, but with the whorls more rounded and distinct.

Species 96. (Mus. ——? Copied.)

PLANORBIS HELOICUS. *Pla. testâ latâ, complanatâ, dextrali, fusco-ferrugineâ, striatâ, paulò arcuatâ; spirâ planulatâ, anfractibus quinis, rotundis; aperturâ obliquè ovato, subrotundâ; disco inferiori excavato.*

THE NAIL-SHAPED PLANORBIS. Shell broad, flat, dextral, rusty-brown, striated, a little arched; spire flattened, whorls five, round; aperture obliquely rounded-oval; lower disc hollow.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLV. fig. 9–12.

Hab. South America.

Species 97. (Mus. ——? Copied.)

PLANORBIS PAROPSEIDES. *Pla. testâ rectâ, parvâ, latiùsculâ, subcomplanatâ, dextrali, fusco, ferrugineâ, obliquè striatâ; spirâ complanatâ, anfractibus quinis, supernè subcomplanatis, angustis, infra medium tumidiùsculis, aperturâ depressâ, infrà paulò inflatâ; disco inferiori latè umbilicato.*

THE 'DISH-LIKE' PLANORBIS. Shell straight, small, rather broad, flattish, dextral, rusty-brown, obliquely striated; spire flattened; whorls five, rather flattened above, narrow, rather tumid below the middle, aperture depressed, a little inflated below; lower disc broadly umbilicated.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLV. f. 5–8.

Hab. South America.

Species 98. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS HELIOPHILUS. *Pla. testâ planatâ, subdepressâ, pallidè fulvâ, sinistrali, lævigatâ; spirâ infundibulatâ; anfractibus quinis, tumidiùsculis, supra suturam angulatim elevatis, infrà rotundis; ultimo supernè subangustatâ, tùm declivi, versus aperturam expanso; aperturâ supernè subacuminatâ, infrà latâ.*

THE SUN-LOVING PLANORBIS. Shell flattened, subdepressed, pale fulvous, sinistral, smooth; spire funnelled; whorls five, rather tumid, angularly raised above the suture, rounded below; last somewhat angular above, then sloped, expanded towards the aperture; aperture subacuminated above, broad below.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLV. f. 13–16.

Hab. South America.

Species 99. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS ANATINUS. *Pla. testâ minutâ, tumidâ, corneâ, depressâ, subglobosâ; spirâ parvâ, subexcavatâ; anfractibus tribus, altis, medio convexis; aperturâ angustâ, semilunari; disco inferiori angustè umbilicato.*

THE DUCK'S PLANORBIS. Shell minute, tumid, horny, depressed, subglobose; spire small, slightly excavated; whorls three, high, convex in the middle; aperture narrow, semilunar, lower disc narrowly umbilicated.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLV. fig. 17–20.

Hab. South Africa.

Species 100. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS ARAKANENSIS. *Pla. pallidè corneâ, translucidâ, tumidâ, dextrali; spirâ angustâ; anfractu ultimo tumido, supernè subangustato, infra medium ventricoso; disco inferiori concavo, anfractu apicali obtecto.*

THE ARAKAN PLANORBIS. Shell pale horn, translucid, tumid, dextral; spire narrow; last whorl tumid, a little angular above, ventricose below the middle; lower disc concave, apical whorl hidden.

GOULD. ——? MS. Brit. Mus.

Hab. Trinidad.

Species 101. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS ISABEL. *Pla. testâ parvâ, tumidâ, altâ, dextrali, ferrugineâ, lævigatâ; spirâ parvâ, subcomplanatâ; anfractibus tribus, angustiùsculis, supernè subangulatis, tùm declivibus; ultimo magno, prope aperturam expanso; disco inferiori umbilicato; aperturâ angustâ, semilunari, margine superiori sinuatim producto.*

THE ISABEL PLANORBIS. Shell small, tumid, high, dextral, ferruginous, smooth; spire small, rather flat; whorls three, rather narrow, slightly angular above, then sloped; last large, expanded near the aperture; lower disc umbilicated; aperture narrow, semilunar, upper margin sinuously produced.

MORELET. ——? Adams. Genera of Mollusca.

Hab. ——?

Species 102. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS ACIES. *Pla. testâ parvâ, utrinque complanatâ, albâ, lævigatâ; anfractibus quinis, subrotundis, supernè angustiùsculis, infernè magis rotundis; aperturâ obliquè ovatâ, supra suturam elevatâ.*

THE SPEAR PLANORBIS. Shell small, flattened on each side, white, smooth; whorls five, rather rounded, rather narrow above, more rounded below; aperture obliquely ovate, raised above the suture.

PORRO. Meg. Villa. Cat. 1844, p. 8.

Hab. Milan.

Species 103. (Mus. Brit.)

PLANORBIS LARGILLIERTI. *Pla. testâ truncato-conicâ, castaneâ, altiùsculâ, nitenti, infra medium subplanulatâ, suprà declivi; spirâ angustatâ, anfractibus tribus, angustissimis, ultimo magno, tumido; aperturâ subtrigonâ, margine superiori flexuosim depressâ; disco inferiori angustè umbilicato.*

LARGILLIERT'S PLANORBIS. Shell truncated-conical, chestnut, rather raised, shining, rather flattened below the middle, sloped above; spire narrow; whorls three, very narrow, last large, tumid; aperture rather trigonal; upper margin flexuously depressed; lower disc with a narrow umbilicus.

—— MS.

Hab. ——?

Species 104. (Fig. *a*, *b*, Mus. Sowerby.)

PLANORBIS VERMICULARIS. *Pla. testâ olivaceo-viridi, politâ, parvâ, dextrali; spirâ planiùsculâ, anfractibus quinis, rotundis, angustatis, declivibus, infra medium subventricosis, subangulatis; disco inferiori concavo; aperturâ subtrigonâ.*

THE VERMICULAR PLANORBIS. Shell olive-green, polished, small, dextral; spire rather flattened; whorls five, rounded, narrow, sloped, rather ventricose below the middle, slightly angular; lower disc concave; aperture subtrigonal.

SOWERBY.

Hab. ——?

Shell with a broader disc and more whorls than *Planorbis parvus*, which, from its colour and general form, it resembles.

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108.

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111.a

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113.

111.b

G.B. Sowerby del et lith.

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PLANORBIS.

PLATE XIII.

Species 105. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS PERFORATUS. *Pla. testâ parvâ, tumidâ, pallidè corneâ, truncato-subconicâ, spirâ angustissimâ, anfractu ultimo tumido, alto, supernè declivi, infra medium ventricoso; disco inferiori planulato, medio angustissimè et profundè umbilicato.*

THE PERFORATED PLANORBIS. Shell small, tumid, pale horn, truncated-subconical, spire very narrow, last whorl tumid, raised, sloped above, ventricose below the middle; lower disc flattened, narrowly and deeply umbilicated in the middle.

GOULD ——? MS. Mus. Brit.

Hab. United States.

Species 106. (Mus. Brit.)

PLANORBIS CULTRATUS. *Pla. testâ pellucidâ, hyalinâ, albâ, truncato-conicâ, spirâ parvâ, anfractibus tribus, depressis; anfractu ultimo declivi, infrà planato, margine acuminato; aperturâ obliquè subtrigonâ, angustâ; margine externo infrà acutè angulato; disco inferiori plano, medio angustè umbilicato.*

THE SHARPENED PLANORBIS. Shell pellucid, hyaline, white, truncato-conical, spire small, whorls three, sunk; last whorl sloped, flattened below, margin acuminated; aperture obliquely subtrigonal, narrow; outer margin sharply angular below; lower disc umbilicated.

D'ORBIGNY ——? MS. Mus. Brit.

Hab. St. Vincent.

Species 107. (Mus. Brit. ——? Copied.)

PLANORBIS MONTANUS. *Pla. testâ depressâ, pallidè fulvâ, sinistrali; spirâ infundibulatâ; anfractu ultimo tumido, suprà infràque angulato; disco inferiori concavo; aperturâ subquadrilaterali, magnâ, supra anfractum ultimum elevatâ.*

THE MOUNTAIN PLANORBIS. Shell depressed, pale fulvous, sinistral; spire funnelled; last whorl tumid, angular above and below; lower disc concave; aperture rather quadrilateral, large, raised above the last whorl.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLIV. f. 5, 8.

Hab. South America.

Species 108. (Mus. Brit.)

PLANORBIS AMMON. *Pla. testâ sinistrali, maximâ, ventricosissimâ, altâ, pallidè subviridi-fulvâ, concentricè rugatâ; spirâ profundè infundibulatâ; anfractibus quaternis, supra suturam rotundè elevatis; ultimo lato, rapidè crescenti, ad aperturam expanso; disco inferiori profundè excavato; aperturâ magnâ, altissimâ, subovatâ, supernè supra suturam elevatâ, acuminatâ; infra anfractum ultimum rotundè producto, intùs subcastaneo, margine interno incrassato.*

THE AMMON PLANORBIS. Shell sinistral, very large, very ventricose, high, pale greenish-fawn, concentrically wrinkled; spire deeply funnelled; whorls four, roundly elevated above the suture; last wide, rapidly enlarged, expanded at the aperture; lower disc deeply hollow; aperture large, very high, subovate, raised above over the suture, acuminated; roundly produced below the last whorl, rather chestnut within, lower margin thickened.

GOULD. United States' Expedition.

Hab. America.

The deep specimen of *Pla. corpulentus*, figured in the first plate, resembles this species, but is not nearly so high nor so ventricose, and the upper part of the whorls are angular instead of being round.

Species 109. (Mus. Brit.)

PLANORBIS ELEVATUS. *Pla. testâ parvâ, albâ, dextrali, lævigatâ, altiùsculâ; spirâ planulatâ, anfractibus convexiùsculis, ultimo subquadrato, supernè declivi, suprà infràque angulato; aperturâ infra angulum ultimi anfractûs depressâ, magnâ, suprà infràque angulatâ, medio convexâ; disco inferiori angulatim concavo.*

THE ELEVATED PLANORBIS. Shell small, white, dextral, smooth, rather high; spire flat, whorls a little convex, last rather square, sloped above, angular above and below; aperture depressed below the angle of the last whorl, convex in the middle; lower disc angularly concave.

SAY. Journ. Bost. Soc. Nat. Hist. 3, Pl. III. f. 15.

Hab. Vermont.

The above name is probably given to the shell because the last whorl against the mouth is raised considerably above the aperture.

Species 110. (Mus. Brit.)

PLANORBIS LENTICULARIS. *Pla. testâ parvâ, subcompressâ, fuscâ, lœvi, dextrali; spirâ planiùsculâ, anfractibus tribus, convexiùsculis, ultimo supernè angulato, carinato, infrà angustatâ; disco inferiori profundè umbilicato; aperturâ subtrigonâ, ad angulum externum subacuminatâ.*

THE LENTICULAR PLANORBIS. Shell small, rather flat, brown, smooth, dextral; spire rather flattened, whorls three, rather convex, last angular above, keeled, narrow below; lower disc deeply umbilicated; aperture subtrigonal, acuminated at the outer angle.

HARTMAN ——? Adams, Genera of Mollusca.

Planorbis operularis. Gould.

Hab. Sacramento River.

Species 111. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS GUADALOUPENSIS. *Pla. testâ sinistrali, compressâ, latâ, fulvâ, politâ; spirâ concavâ, anfractibus senis, convexiùsculis; ultimo anfractu magno, supra suturam elevatâ, tum declivi, infrà latiùsculâ; disco inferiori convexo; aperturâ subtrigonâ, margine inferiori ad anfractum ultimum producto.*

THE GUADALOUPE PLANORBIS. Shell sinistral, compressed, broad, fulvous, polished; spire concave, whorls six, convex; last whorl large, raised above the suture, then sloped, rather broad below; lower disc convex; aperture rather trigonal, lower margin produced on the body whorl.

SOWERBY. Genera of Recent and Fossil Shells.

Hab. Guadaloupe.

Species 112. (Mus. Brit.)

PLANORBIS DILATATUS. *Pla. testâ albâ, dextrali, supernè angulatâ, infra angulum angustatâ, disco inferiori profundè excavato, aperturâ maximâ, trigonâ, supernè complanatâ, infrà acuminatâ.*

THE DILATED PLANORBIS. Shell white, dextral, angular above, narrow below the angle, lower disc deeply excavated, aperture very large, trigonal, flattened above; acuminated below.

PFEIFFER. Moll. de l'Allemagne, Vol. II. p. 165.

Hab. Massachusetts.

The last whorl suddenly expands towards the mouth, which is the largest of the whole genus in proportion to the body whorl.

Species 113. (Mus. Brit.)

PLANORBIS SWINHOEI. *Pla. testâ subdepressâ, semipellucidâ, fuscâ, subconico-truncatâ, supernè planulatâ, medio subangulatim productâ, infrà planulatâ; disco inferiori angustè umbilicato; aperturâ subtrigonâ, margine externo producto, margine superiori flexuosim depressâ.*

SWINHOE'S PLANORBIS. Shell subdepressed, semipellucid, brown, rather angularly truncated, flattened above, somewhat angularly produced in the middle, flattened below, lower disc narrowly umbilicated; aperture rather trigonal, outer margin produced; upper margin flexuously depressed.

H. ADAMS. Proc. Zool. Soc.

Hab. Isl. Formosa.

114.

115a

115b

116.

117.

118.

119.

120.

122.

123

124.

G.B. Sowerby del. et Lith

Vincent Brooks Day & Son Imp

PLANORBIS.

PLATE XIV.

Species 114. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS DEFORMIS. *Pla. testâ parvâ, cinereo-ferrugineâ, complanatâ, dextrali; spirâ planulatâ; anfractibus quaternis, tumidis, subrotundis; ultimo versus aperturam irregulariter tumido, ad marginem expanso; aperturâ arcuatim-conicâ, anfractum ultimum suprà infràque superante; disco inferiori ad marginem planulato, medio concavo.*

THE DEFORMED PLANORBIS. Shell small, rusty-grey, flattened, dextral; spire flattened, whorls four, tumid, rather rounded, last irregularly swelled, expanded at the margin; aperture curved-conical, extending above and below the last whorl; lower disc flattened at the margin, concave in the middle.

LAMARCK. Anim. sans Vert.

Hab. ——?

The last whorl becomes tumid a little way before the expansion of the aperture.

Species 115. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS ALEXANDRINUS. *Pla. testâ dextrali, subcompressâ, fulvâ, anfractibus quaternis, ultimo latiùsculo, medio tumido, infrà subangustato; aperturâ subtrigonâ, dentibus quinis laminatis longè internis armatâ; margine intùs incrassato; disco inferiori latè umbilicato.*

THE ALEXANDRINE PLANORBIS. Shell dextral, rather compressed, fulvous, whorls four, last rather wide, middle tumid, rather narrow below; aperture subtrigonal, armed far back internally with five teeth; margin thickened within; lower disc broadly umbilicated.

EHRENBERG. Roth. Moll. Sp. Pl. II. f. 8.

Genus, *Planorbula*. Haldeman.

Hab. Egypt.

This species belongs to the section which has been separated under the generic name of *Planorbula*. Far back in the throat may be seen laminated plates jutting out so as to contract the opening.

Species 116. (Mus. Brit.)

PLANORBIS DENTATUS. *Pla. testâ dextrali, compressâ, fulvâ, spirâ planiùsculâ; anfractibus convexis, supernè latis, infra medium angustatis, disco superiori lato, disco inferiori angustato, profundè et angustè excavato; aperturâ magnâ, infra anfractum ultimum productâ, longè intùs laminatim tridentatâ, margine intùs incrassato.*

THE TOOTHED PLANORBIS. Shell dextral, compressed, fulvous, spire rather flat; whorls convex, broad above, narrow below the middle, upper disc broad, lower disc narrow, deeply and narrowly excavated; aperture large, produced below the last whorl, with three laminar teeth far within, margin thickened within.

DUNKER. (Planorbula) ——? Adams' Gen. of Moll.

Hab. ——?

Species 117. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS ALBICANS. *Pla. testâ albidâ, solidiùsculâ, dextrali, spirâ planulatâ; anfractibus convexiùsculis, quaternis, moderatè crescentibus, ultimo ad aperturam valdè deflexo, disco inferiori angulatim excavato; aperturâ usque ad marginem inferiorem ultimi anfractûs depressâ.*

THE WHITISH PLANORBIS. Shell whitish, rather solid, dextral, spire rather flattened; whorls four, rather convex, moderately increased, last much bent down at the aperture, lower disc angularly convex; aperture bent down to the lower margin of the last whorl.

PFEIFFER.

Hab. Lima.

Species 118. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS COMPRESSUS. *Pla. testâ compressâ, latiùsculâ, pallidâ, lævigatâ, dextrali, supernè angustatâ, infrà latâ, subcarinatâ, spirâ depressâ; aperturâ obliquè pyramidatâ, supernè angustatâ, margine inferiori producto.*

THE COMPRESSED PLANORBIS. Shell compressed, rather broad, pale, smooth, dextral, narrowed above, broad below, somewhat keeled, spire depressed; aperture obliquely pyramidal, angular above, lower margin produced.

HUTTON. Journ. Asi. Soc. Beng. Vol. III. p. 91.

Planorbis Tondanensis. Mousson.

Hab. River Ganges.

Species 119. (Mus. Brit.)

PLANORBIS DENTIFERUS. *Pla. testâ angustâ, tumidâ, albidâ, spirâ planiùsculâ; anfractibus quaternis, altis, supernè ventricosis, infernè subangustatis, disco inferiori subangustè excavato; aperturâ magnâ, auriformi, supra infraque ultimum anfractum productâ, longè intùs quinquefariàm laminatim dentatâ.*

THE TOOTH-BEARING PLANORBIS. Shell narrow, tumid, whitish, spire rather flat; whorls four, high, ventricose above, slightly narrowed below, lower disc rather narrowly excavated; aperture large, ear-shaped, produced above and below the last whorl, with five laminar teeth far within.

ADAMS, C. B. Contributions to Conchology.

Hab. Jamaica.

Species 120. (Fig. *a*, *b*, Mus. Hanley.)

PLANORBIS HYPTIOCYCLOS. *Pla. testâ tumidâ, albidâ, dextrali, spirâ depressâ; anfractibus tribus, latiùsculis, supra suturam tumidè elevatis; aperturâ supra suturam elevatâ, tùm declivi, margine inferiori obliquâ, disco inferiori excavatâ.*

THE REFLECTED PLANORBIS. Shell tumid, whitish, dextral, spire depressed; whorls three, rather broad, raised in a swelling above the suture; aperture raised above the suture, then sloped, lower margin oblique, lower disc excavated.

BENSON. Ann. Nat. Hist. 1863, Ser. III. Vol. II. p. 89.

Hab. Ceylon.

Species 121. (Fig. *a*, *b*, Mus. Hanley.)

PLANORBIS ROTULA. *Pla. testâ parvâ, pallidè fulvâ, tumidiùsculâ, lævigatâ, dextrali, spirâ depressâ; anfractibus quinis, convexis, supra suturam paulò elevatis, disco inferiori latè concavo, anfractibus rotundis; aperturâ obliquè ovatâ.*

THE LITTLE WHEEL PLANORBIS. Shell small, pale fulvous, rather tumid, smooth, dextral, spire depressed; whorls five, convex, a little raised above the suture, lower disc broadly concave, whorls round; aperture obliquely ovate.

BENSON. Ann. Nat. Hist. 1863, Series II. Vol. V. p. 351.

Hab. Moradabad.

Species 122. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS CORINNA. *Pla. testâ parvâ, albidâ, lævigatâ, dextrali; anfractibus quaternis, rotundis, distinctis; disco superiori subdepresso, disco inferiori concavo; aperturâ transversè subovatâ.*

THE CORINNA PLANORBIS. Shell small, whitish, smooth, dextral; whorls four, rounded, distinct; upper disc rather depressed, lower disc concave; aperture transversely subovate.

GRAY. Proc. Zool. Soc. 1850.

Hab. New Zealand.

Species 123. (Fig. *a*, *b*, Mus. Brit.)

PLANORBIS INTERTEXTUS. *Pla. testâ angustâ, altâ, sinistrali, tenuissimè striatâ, castaneâ, distanter concentricè albo-fasciatâ et nigro-lineatâ, spirâ medio angustè infundibulatâ; anfractu ultimo supra suturam angulatim elevato, disco inferiori lato, angulato, excavato; aperturâ altâ, subtrigonâ, intùs griseâ.*

THE TEXTILE PLANORBIS. Shell narrow, high, sinistral, very finely striated, chestnut, distantly concentrically white-banded and black-lined, spire narrowly funnelled in the middle; last whorl raised above the suture in an angle, lower disc broad, angular, hollow; aperture high, subtrigonal, grey within.

SHUTTLEWORTH. ——? MS. Brit. Mus.

Hab. Florida.

Resembling *Planorbis biangulatus*, excepting in the white bands bordered by dark lines appearing on the surface of the outer whorl.

PLANORBIS.

	Plate.	Species.
Acies, *Porro*	XII.	102
affinis, *Adams*	IV.	28
albicans, *Pfeiffer*	XIV.	117
albus, *Müller*	III.	17
Aldemani, C. B. Ad. Not identified.		
Alexandrinus, *Ehrenberg*	XIV.	115
ammoneus, Beck. Not identified.		
Ammon, *Gould*	XIII.	108
anatinus, *D'Orbigny*	XII.	99
Andecolus, *D'Orbigny*	VI.	50
anisus, Beck. Not identified.		
Antiguensis, *Guilding* (?)	XI.	92
antrorsus, Conrad. Not identified.		
Arakanensis, *Gould*	XII.	100
Arcticus, *Beck*	VIII.	64
armigerus, *Say*	III.	18
auritus, *Sowerby* (*Redfieldi*, by error)	III.	20
Bahiensis, Dunker. Not identified.		
Beckianus, *Dunker*	VII.	55
Bengalensis, *Dunker*	IV.	27
biangulatus, *Sowerby*	IV.	25
bicarinatus, *Say*	I.	7
brunneus, *Gray*	V.	40
calathus, *Benson*	IV.	30
campanulatus, *Say*	II.	11
Cantori, *Benson*	X.	79
carinatus, *Müller*	II.	12
catillus, *Anton* (?)	VI.	45
Chilensis, *Anton*	VII.	57
Chinensis, Dunker. Not identified.		
circumlineatus, *Shuttleworth*	VI.	48
coarctatus, *Sowerby*	III.	21
cœnosus, *Benson*	X.	78
commutatus, *Dunker*	VIII.	63
complanatus, *Linnæus*	I.	5
compressus, *Hutton*	XIV.	118
concavus, *Anthony*	XI.	86
contortus, *Müller*	II.	9
convexiusculus, *Hutton*	XI.	93
coretus, Adanson. Not identified.		
corinna, *Gray*	XIV.	122
corneus, *Linnæus*	I.	1
Coromandelicus, *Küster*	IV.	34
corpulentus, *Say*	IX.	4
costulatus, *Krauss*	IV.	26
cultratus, *D'Orbigny*	XIII.	106
declivis, *Sowerby*	IV.	29
deflexus, *Say*	XI.	88
deformis, *Lamarck*	XIV.	114
dentatus, *Dunker*	XIV.	116
dentiferus, *Adams*	XIV.	119
depressissimus, *Moricand*	VIII.	66
dilatatus, *Pfeiffer*	XIII.	112
dubius, Hartman. Unidentified.		
eburneus, *Gray*	V.	38
elegantulus, *Dohrn*	IX.	69
elevatus, *Say*	XIII.	109
eugonotus, Conrad. Not identified.		
exacutus, *Say*	XI.	94
exustus, *Deshayes*	IV.	31
ferrugineus, *Spix*	IX.	73
Folkeii, Dunker. Not identified.		
fuscus, *Dunker*	IX.	74
Gilberti, *Dunker*	V.	37
glaber, *Jeffreys* (?)	II.	10
glabratus, *Say*	XI.	91
gracilentus, *Gould*	VIII.	65
Guadaloupensis, *Sowerby*	XIII.	111
heliophilus, *D'Orbigny*	XII.	98
heloicus, *D'Orbigny*	XII.	96
hemisphærata, Benson. Not identified.		
Hindsianus, *Dunker*	VI.	44
humilis, C. B. Adams. Not identified.		
hyptiocyclos, *Benson*	XIV.	120
Indicus, Benson	XI.	94
inflatus, *Dunker*	VI.	47
intermedius, Charp. Not identified.		
intertextus, *Shuttleworth*	XIV.	123
Isabel, *Morelet*	XII.	101
kermatoides, *D'Orbigny*	VII.	52
lacustris, *Lightfoot*	II.	16
Lanieranus, *D'Orbigny*	VII.	58
Largillierti ——?	XII.	103
lenticularis, *Hartman* (?)	XIII.	110
lentus, *Say*	X.	83
leucostoma=spirorbis	II.	14
limosa, Dunker. Unidentified.		
lucidus, *Philippi* (?)	VII.	53

	Plate.	Species.
lugubris, *Wagner*	III.	24
Macnabianus, *Adams*	V.	41
magnificus, Conrad. Not identified.		
marmoratus, Michaud. Unidentified.		
Merguiensis, *Philippi*	XI.	85
modicus, *Benson*	IX.	76
montanus, *D'Orbigny*	XIII.	107
Moricandi, *Beck*	IX.	71
multivalvis, *Case*	IX.	72
nanus, *Benson*	IX.	75
Natalis, *Krauss*	IV.	32
nautileus, *Linnæus*	II.	8
Newberryi, *Lea*	X.	81
nitidulus, *Dunker*	VIII.	61
nitidus, *Müller*	II.	15
obesus, *Dunker*	X.	82
obtusus, *Deshayes*	V.	39
olivaceus, *Spix*	I.	6
opercularis, Gould	XIII.	110
orbiculatus, *Morelet*	III.	22
orientalis, *Lamarck*	XI.	89
pallidus, *C. B. Adams*	VII.	56
Panamensis, *D'Orbigny*	XII.	95
parallelus, Say. Unidentified.		
paropseides, *D'Orbigny*	XII.	97
parvus, *Say*	XI.	87
peregrinus, *D'Orbigny*	X.	84
perforatus, *Gould* (?)	XIII.	105
Peruvianus, *Broderip*	I.	3
Pfeifferi, *Krauss*	IV.	33
Philippinarum, *Dunker*	III.	23
Ponsonbyi, *Smith*	X.	80
Redfieldi, *C. B. Adams* (*succineus*, Sowb. by error)	III.	19
regularis, Lea. Unidentified.		
Rossmässleri, *Schmidt*	VII.	59
rotula, *Benson*	XIV.	121
Rupelli, Dunker. Unidentified.		
Salleanus, *Dunker*	VI.	46
septemgyratus, *Zeigler*	VII.	54
sericeus, *Dunker*	VIII.	68
Sibiricus, *Dunker*	V.	35
sindicus, *Benson*. Omitted.		
Spenceri, *Allen*	VIII.	60
spirorbis, *Müller*	II.	14
stagnicola, *Morelet*	V.	43
Stelzneri, *Dohrn*	V.	36
stramineus, *Dunker*	XI.	90
subangulatus, *Philippi*	VIII.	67
subcrenatus, *Carpenter*. Omitted.		
succineus, Sowb., see Redfieldi	III.	19
Swinhoei, *H. Adams*	XIII.	113
tæniatus, *Morelet*	V.	42
tenagophilus, *D'Orbigny*	VI.	51
terversanus, *D'Orbigny*	VI.	49
Tondanensis, Mousson	XIV.	118
trivolvis, *Say*	I.	2
trochoides, *Benson*	IX.	70
umbilicatus, *Benson*	X.	77
ungulatus, *Chitty*	VIII.	62
vermicularis, *Sowerby*	XII.	104
vortex, *Linnæus*	II.	13

MONOGRAPH

OF THE GENUS

PLANAXIS.

By Thy kind power and influencing care
The various creatures live, and move, and are. — *Milton.*

1

2

3

4a

5

6

4b

7a

7b

4c

G.B. Sowerby, del. et lith.

Vincent Brooks Day & Son Imp.

PLANAXIS.

PLATE I.

Genus PLANAXIS. *Lamarck.*

Testa ovato-conica, solida, plerùmque spiraliter sulcata; spira plerùmque brevis, conica; apertura subtrigona, intùs dentato-lirata, anticè leviter canalifera, emarginata; columella subarcuata, planata, ad terminum truncata; operculum ovato-oblongum, unispirale, nucleo ferè terminali.

Shell ovately conical, solid, generally spirally grooved; spire for the most part short, conical; aperture rather trigonal, tooth-ridged within, with a slight canal and notch in front; columella slightly arched, flattened, truncated at the end; operculum ovate-oblong, with one-whorled spire, nucleus nearly terminal.

Few genera so restricted in numbers are so widely spread in their habitats. We have identified 39 species, of which the greater number are tenants of Australian, South Sea Island, and Philippine groups. The Red Sea and Persian Gulf, the Mauritius and West Indies contribute their portion; the Chinese and Indian Seas have several, but there are no European species. The animals are marine, but partly ampbibious, and spend a large portion of their existence above water. The slight canal and notch at the front of the aperture, and the flattened columella terminating in a notch, render this genus characteristic and easily distinguishable.

Species 1. (Mus. Hanley.)

PLANAXIS ENCAUSTICUS. *Pla. testâ crassâ, brevi, albidâ, cærulœâ, fuscoque nebulatâ et fasciatâ, lævigatâ; anfractibus senis ad septenos, ultimo ventricoso, infra medium rotundè, ad suturam angustè angulato, nigro-punctato, spiraliter, tenuiter, distanter, infra angulum validè sulcato; aperturâ castaneâ, columellâ brevi, latè truncatâ, prope suturam validè callosâ; labro intùs distanter et validè dentato-lirato.*

THE ENAMELLED PLANAXIS. Shell thick, short, whitish, clouded, and banded with blue and brown, smooth; whorls six to seven, the last ventricose, roundly angular below the middle, and narrowly at the suture; black-spotted, spirally, finely, distantly grooved, strongly below the angle; aperture chestnut, columella short, broadly truncated, with a strong callus near the suture, outer lip distantly and strongly tooth-ribbed within.

SMITH. Proc. Zool. Soc. 1872, p. 38.

Hab. Arracan.

In the specimens from which the description was taken (no others being known) the upper whorls are much corroded, and the body whorl being smooth, with spiral grooves almost obsolete above, gives the remaining surface a sort of enamelled appearance.

Species 2. (Mus. Brit.)

PLANAXIS CASTANEUS. *Pla. testâ subpyriformi, lœvigatâ, castaneâ, spiraliter tenuiter striatâ, longitudinaliter obliquè subliratâ; spirâ elevatâ, acuminatâ, anfractibus senis, convexiùsculis; ultimo bulbiformi, aperturâ parvâ, labro intùs 7-denticulato, margine tenui, columellâ subarcuatâ, infrà subexpansâ.*

THE CHESTNUT PLANAXIS. Shell somewhat pyriform, smooth, chestnut, spirally finely striated, longitudinally obliquely slightly ridged; spire raised, acuminated, whorls six, rather convex; end bulb-shaped, aperture small, outer lip seven-toothed within, margin thin, columella slightly arched, rather expanded below.

SMITH. Proc. Zool Soc. 1872, p. 41.

Hab. —— ?

Species 3. (Mus. Brit.)

PLANAXIS CRASSISPIRA. *Pla. testâ oblongâ, subdistanter spiraliter sulcatâ, grisea, nigro-punctatâ; spirâ elevatâ, crassâ, subcylindricâ, obtusâ; anfractu ultimo obtusè angulato, aperturâ parvâ, subtrigonâ, columellâ albâ, infrà latè productâ, labro intùs validè dentato.*

THE THICK-SPIRED PLANAXIS. Shell oblong, rather distantly spirally grooved, grey, spotted with black; spire elevated, thick, subcylindrical, obtuse; last whorl obtusely angular; aperture small, subtrigonal, columella white, broadly produced below; outer lip strongly toothed within.

SMITH. Proc. Zool. Soc. 1872, p. 39.

Hab. —— ?

Differing from *Planaxis sulcatus* in the narrow, straight-sided form.

Species 4. (Fig. *a*, *b*, *c*, Mus. Hanley.)

PLANAXIS SULCATUS. *Pla. testâ trochiformi, crassâ, profundè sulcatâ, fusco-rubescenti, nigro alboque maculatâ, costis prominentibus; spirâ conicâ, anfractibus quinis, ultimo magno, infra medium obscurè angulato; aperturâ subtrigonâ, columellâ rectiusculâ, latâ, ad suturam valdè callosâ et canaliculatâ; labro intùs validè lirato-denticulato, margine crenulato.*

THE GROOVED PLANAXIS. Shell trochus-shaped, thick, deeply-grooved, spotted with reddish-brown, black and white, ribs prominent; spire conical; whorls five, last large, obscurely angular below the middle; aperture subtrigonal, columella rather straight, broad, with a strong callosity and a canal at the suture; outer lip strongly tooth-ridged within, margin crenulated.

BORN. (Buccinum) Mus. Vindob. p. 258, Pl. X. f. 5, 6.

Planaxis buccinoides. Deshayes.

Planaxis undulata. Lamarck.

Buccinum pyramidale. Lamarck.

Hab. Australia, Philippines, Mauritius, South Africa.

Species 5. (Mus. Brit.)

PLANAXIS OBSCURUS. *Pla. testâ angustè pyramidatâ, profundè et crebrè sulcatâ, griseâ, maculatâ; spirâ elevatâ, anfractibus quinis, aperturâ breviusculâ, canali postico lato, columellâ arcuatâ, ad terminum acutè truncatâ; labro intùs validè dentato, margine tenui, subflexuoso.*

THE OBSCURE PLANAXIS. Shell narrowly pyramidal, deeply and closely grooved, grey, spotted; spire elevated, whorls five; aperture rather short, sharply truncated; outer lip strongly toothed within, margin thin, rather flexuous.

A. ADAMS. Proc. Zool. Soc. 1851, p. 271.

Hab. ——?

The whorls are more straight-sided than in *Planaxis planicostata*, and the grooves narrower.

Species 6. (Mus. Brit.)

PLANAXIS BREVICULUS. *Pla. testâ breviter trochiformi, latâ, crassâ, spiraliter (infrà magis profundè) sulcatâ, griseo-brunneâ, nigro maculatâ; spirâ brevi, anfractibus quinis, ultimo maximo, infra medium obscurè angulato; aperturâ subtrigonâ, fuscâ, ad marginem nigro maculatâ, columellâ brevi, supernè validè callosâ, infrà latâ, latè truncatâ, labro fusco, liris dentiformibus magnis.*

THE SHORT LITTLE PLANAXIS. Shell shortly trochus-shaped, broad, thick, spirally-grooved (more deeply below), grey-brown, spotted with black; spire short, whorls five, last very large, obscurely angular; aperture subtrigonal, brown, black-spotted at the margin, columella short, with a strong callus above, broad below, broadly truncated, outer lip brown, with large tooth-shaped ridges.

DESHAYES. Mag. de Zool. 1844, Pl. CVIII.

Hab. Guam and New Guinea.

Broader and more finely grooved than *Planaxis sulcata*.

Species 7. (Mus. Hanley.)

PLANAXIS NUCLEUS. *Pla. testâ ovato-acuminatâ, nigro-fuscâ, prope suturam, infra medium et post marginem aperturæ profundè sulcatâ, medio lævigatâ; spirâ breviusculâ, acuminatâ; anfractibus brevibus, convexiusculis; aperturâ pyriformi, longiusculâ, validissimè bicanaliculatâ, columellâ latissimâ, planulatâ, medio longitudinaliter sulcatâ, termino subrotundo; labio externo expanso, validè crenulato.*

THE LITTLE NUT PLANAXIS. Shell ovate-acuminate, black-brown, deeply grooved near the suture, below the middle and behind the margin of the aperture, smooth in the middle; spire rather short, acuminated, whorls short, a little convex; aperture pyriform, rather long, strongly bi-canaliculated, columella very broad, flattened, with a longitudinal groove in the middle, with rather round end; outer lip expanded, strongly crenulated.

LAMARCK. Anim. s. Vert. Vol. VII. p. 249.

Planaxis semisulcata. Sowerby.

Hab. West Indies, Jamaica.

The grooves, which are deep at the margins and lower part of the last whorl, are obsolete in the middle of the whorls.

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14 *b*

G. B. Sowerby, del. et lith.

Vincent Brooks Day & Son Imp.

PLANAXIS.

PLATE II.

Species 8. (Mus. Hanley.)

PLANAXIS NIGRITELLUS. *Pla. testâ brunneo-nigrescenti; spirâ obtusâ, conicâ; anfractibus quinis, convexiùsculis, distanter sulcatis, ultimo magno, sulcis medio subevanidis; columellâ supernè callosâ, arcuatâ; labro subpatulo, intùs tenuiter lirato.*

THE LITTLE BLACK PLANAXIS. Shell blackish brown; spire obtuse, conical; whorls five, rather convex, distantly sulcated; last large, with the sulci nearly obsolete in the middle; columella callous above, arched; outer lip rather patulous, finely ridged within.

FORBES. (*Nigritella.*) Proc. Zool. Soc. 1850. Pl. II. f. 6.

Planaxis acutus. Menke.

Planaxis obsoletus. Menke.

The above name is given to the species by Mr. Smith on account of the name *acutus* being previously applied to another species.

Hab. Mazatlan.

Species 9. (Mus. Brit.)

PLANAXIS ACUTUS. *Pla. testâ brunneâ, acutè pyramidatâ; anfractibus septenis, convexis, mediolævigatis, suprà infràque tenuiter sulcatis; aperturâ breviùsculâ, latâ, subcœruleâ; columellâ latâ, labro intùs tenuiter liratâ.*

THE ACUTE PLANAXIS. Shell brown, sharply pyramidal; whorls seven, convex, smooth in the middle, finely sulcated above and below; aperture rather short, broad, slightly blue; columella broad; outer lip finely ridged within.

KRAUSS. Südafrikanischen Mollusken. Tab. VI., f. 2.

Hab. Natal.

Species 10. (Mus. Brit.)

PLANAXIS ATROPURPUREUS. *Pla. testâ nigro-plumbeâ, oblongâ, obtusâ, lævigatâ, anfractibus tribus, parum convexis, ultimo infrà sulcis tribus leviter sculpto; aperturâ subtrigonâ, castaneâ, labro intùs lævigato, supernè subdepresso.*

THE PURPLE-BLACK PLANAXIS. Shell black-lead, oblong, obtuse, smooth, whorls three, rather convex, last lightly sculptured below with three grooves; aperture subtrigonal, brown; outer lip smooth within, slightly depressed above.

RECLUZ. Revue Zoologique, 1843, p. 261.

Planaxis Albersii. Dunker.

Hab. South Seas.

Species 11. (Mus. Hanley.)

PLANAXIS SIMILIS. *Pla. testâ subpyramidatâ, brunneâ, omninò subdistanter sulcatâ, sulcis prope suturam et infra medium fortioribus; spirâ pyramidatâ, acuminatâ; anfractibus septenis, superioribus convexiùsculis; aperturâ purpurascenti, labro crasso, intùs dentato-lirato, callo labiali postico distincto, parvo; rimâ angustâ.*

THE SIMILAR PLANAXIS. Shell rather pyramidal, brown, in every part rather distantly grooved; grooves stronger near the suture and below the middle; spire pyramidal, acuminated; whorls seven, upper rather convex; aperture purplish, lip thick, tooth-ridged within, posterior labial callus distinct, small; notch narrow.

SMITH. Proc. Zool. Soc. 1872, p. 41.

Hab. Sandwich Islands.

More conical than *Planaxis Hanleyi*, with less expanded aperture, thicker outer lip and nearly equal grooves in every part.

Species 12. (Mus. Hanley.)

PLANAXIS HANLEYI. *Pla. testâ subovatâ, brunneâ; spirâ convexo-conicâ; anfractibus senis, moderatè convexis, apicalibus politis, cæteris suprà infràque spiraliter sulcatis; ultimo magno, infrà fortissimè sulcato; aperturâ magnâ, patulâ; labro tenuiùsculo, intùs tenuissime lirato, rimâ suturali subrotundâ.*

HANLEY'S PLANAXIS. Shell subovate, brown; spire convexly conical; whorls six, moderately convex;

apical polished, others spirally grooved above and below; last large, very strongly grooved below; aperture large, patulous; outer lip very thin, very finely ridged within, sutural notch rather rounded.

SMITH. Proc. Zool. Soc. 1872.

Hab. Sandwich Islands.

Mr. Smith mentions as a variety a specimen in which the posterior callus and inflected edge of the outer lip almost meet, so as to form a rounded hole like that in *Pupina*. I regard this as only a slight malformation. Yet the slit in this species is generally rounder than in *Planaxis similis*.

Species 13. (Mus. Hanley.)

PLANAXIS NIGER. *Pla. testâ nigrâ, ovato-pyramidatâ, spirâ acuminatâ, anfractibus senis, apicalibus albis, politis, ultimo magno, epidermide tenui, subviridi, infrà angustè sulcato; aperturâ subtrigonâ, canali antico rotundo, canali postico lato; labro expanso, patulo, intùs incrassato, tenuissimè crenulato.*

THE BLACK PLANAXIS. Shell black, ovately pyramidal, spire acuminated, whorls six, apical, white, polished, last large, covered with a greenish epidermis, narrowly grooved below; aperture rather trigonal, anterior canal rounded, posterior canal broad; outer lip expanded, patulous, thickened and very finely crenulated within.

QUOY. (*Nigra.*) Voyage de l'Astrolabe, p. 49.

Hab. New Ireland.

Species 14. (Mus. Hanley.)

PLANAXIS LABIOSUS. *Pla. testâ obliquè subpyramidatâ, griseâ, fasciis nigrescentibus, medio angustatis cinctâ, epidermide densè ciliatâ indutâ, anfractibus quinis, apicali acuto, ultimo maximo; aperturâ magnâ intùs, prope marginem crassâ, lævigatâ.*

THE LIPPED PLANAXIS. Shell obliquely subpyramidal, grey, and girt with blackish bands, narrow in the middle, covered with a thickly ciliated epidermis, whorls five, apical sharp, last very large; aperture large, thick within, near the margin, smooth.

ADAMS (A.) Proc. Zool. Soc. 1851. p. 272.

Planaxis plumbea. Pease.

Planaxis Bronni. Dunker.

Planaxis pediculus. Kusten.

Hab. Sandwich Islands.

Species 15. (Mus. Hanley.)

PLANAXIS CINGULATUS. *Pla. testâ acutè pyramidatâ, spiraliter crebrè sulcatâ; anfractibus septenis, supernè fusco latè fasciatis, medio angustè lineatis; aperturâ breviùsculâ, purpurascenti, labio externo intùs liro dentato, margine lineo-punctato; columellâ subumbilicatâ.*

THE BELTED PLANAXIS. Shell sharply pyramidal, spirally closely grooved; whorls seven, broadly banded above with brown, narrowly lineated in the middle; aperture rather short, purplish, outer lip tooth-ridged within, margin line-spotted; columella subumbilicated.

ADAMS (Arthur). Proc. Zool. Soc. 1851, p. 271.

Hab. China Seas.

Species 16. (Mus. Hanley.)

PLANAXIS STRIATULUS. *Pla. testâ ovato-pyramidatâ; fulvâ, lævigatâ, rubro spiraliter lineatâ; spirâ acuminatâ, conicâ; anfractibus senis; aperturâ breviùsculâ, columellâ labroque purpureis, labro intùs incrassato, vix lirato.*

THE STRIATED PLANAXIS. Shell pyramidal; fulvous, smooth, spirally lineated with red; spire acuminated, conical; whorls six; aperture rather short, columella and outer lip purple, outer lip thickened within, scarcely ridged.

PHILIPPI. Zeitschrift für Malak. 1851. p. 91.

Hab. —— ?

The species is subject to some variation, one variety being nearly white and another (in the British Museum) with only a broad cærulean band in the middle of the whorls.

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23 b.

G.B. Sowerby, del. et lith.

Vincent Brooks Day & Son Imp.

PLANAXIS.

PLATE III.

Species 17. (Mus. Hanley.)

PLANAXIS SUTURALIS. *Pla. testâ parvâ, albâ, crassiùsculâ, turritâ, pyramidatâ, apice acuminato; anfractibus septenis, suturâ excavatâ separatis, spiraliter profundè sulcatis, supernè angulatis, inter sulcas planatis, columellâ supernè breviter callosâ, canali postico brevi, aperturâ brevi; labro crasso, dentibus internis liriformibus decem.*

THE SUTURAL PLANAXIS. Shell small, white, rather thick, turreted, pyramidal; apex acuminated; whorls seven, separated by a deep suture, spirally deeply grooved, angular above, flat between the grooves; columella shortly callous above, posterior canal short; aperture short; outer lip thick, inner ridge-shaped teeth ten.

SMITH. Proc. Zool. Soc. 1872.

Hab. Chinese Seas.

Species 18. (Mus. Brit.)

PLANAXIS ATER. *Pla. parvâ, oblongo-pyramidatâ, nigrâ, obscurissimè fasciatâ; spirâ elongatâ, conicâ, anfractibus senis, lateraliter subcomplanatis, ultimo majùsculo; aperturâ parvâ, breviter subtrigonâ, intùs septem-liratâ; canali postico nullo.*

THE DARK PLANAXIS. Shell small, oblong-pyramidal, black, very obscurely banded; spire elongated, conical, whorls six, laterally rather flat, last rather large; aperture small, shortly subtrigonal, with seven internal ridges; no posterior canal.

PEASE. (*Atra.*) American Journ. of Conchology.

Hab. Marquesas Islands.

In the obscurity of the dark colouring, light interstices of dark lines can be traced; and the species somewhat resembles the more obscure varieties of *Planaxis lineata*.

Species 19. (Mus. Hanley.)

PLANAXIS ABBREVIATUS. *Pla. testâ nigrâ, lævigatâ, subovatâ, brevi; spirâ brevissimâ, anfractibus quaternis, ultimo maximo, infrà quinque-sulcato, aperturâ purpureo-nigrescenti, magnâ, intùs tenuiter liratâ, canali postico latiùsculo.*

THE ABBREVIATED PLANAXIS. Shell black, smooth, subovate, short; spire very short, whorls four, last large, five-grooved below; aperture blackish-purple, large, finely ridged within, posterior canal rather wide.

PEASE. (*Abbreviata.*) Proc. Zool. Soc. 1865, p. 515.

Hab. Sandwich Islands.

Considerably shorter in the spire than *Planaxis niger* of Quoy, which it otherwise much resembles.

Species 20. (Mus. Hanley.)

PLANAXIS LINEATUS. *Pla. testâ parvâ, oblongo-pyramidatâ, fulvâ vel griseâ, variè spiraliter rubro vel nigro spiraliter lineatâ et fasciatâ, spirâ elongatâ, acuminatâ, anfractibus senis ad septenos, quatuor primis sulcato-liratis; aperturâ brevi, subtrigonâ, intùs distanter dentato-liratâ, canali postico nullo.*

THE LINEATED PLANAXIS. Shell small, oblong-pyramidal, fulvous or grey, variously spirally lined and banded; spire elongated, acuminated, whorls six or seven, first four groove-ridged; aperture short, subtrigonal, distantly tooth-ridged within, no posterior canal.

COSTA. (*Buccinum.*) Brit. Conch. p. 130.

Buccinum pediculare. Lamarck.

Hab. West Indies.

This well-known West Indian shell was first described by Da Costa as British. A foreign specimen must have come into his hands by mistake.

Species 21. (Mus. Hanley.)

PLANAXIS SUCCINCTUS. *Pla. testâ parvâ, ovato-pyramidatâ, fulvâ subdistanter tenuiter rubro-lineatâ; spirâ subelevatâ, acuminatâ; anfractibus senis, convexiùsculis, superioribus liràto-sulcatis; aperturâ breviùsculâ, latâ, intùs liratâ, canali postico nullo.*

THE LINE-GIRT PLANAXIS. Shell small, ovately pyramidal, fulvous, rather distantly, finely red-lined; spire slightly elevated, acuminated; whorls six, rather convex, upper groove-ridged; aperture rather short, broad, ridged within; no posterior canal.

A. ADAMS. Proc. Zool. Soc. 1851, p. 272.

Hab. West Indies.

The lines are thinner and more distant, the whorls are more rounded and the spire is shorter in pro-

portion to the aperture than in *Planaxis lineatus*. Yet the variations in individuals is such that the two species are determined with difficulty.

Species 22. (Mus. ——? Copied)

PLANAXIS HERMANNSENI. *Testâ parvâ, solidâ, ovato-oblongâ, atro-fuscâ, lineis fulvis cinctâ; spirâ acuminatâ, anfractibus senis, convexis, apicalibus sulcatis, ultimo infrà sulcato, ventricoso; caudâ post columellam umbilicatâ; aperturâ ovatâ, patulâ, albâ, lineatâ, intùs incrassatâ, liratâ.*

HERMANNSEN'S PLANAXIS. Shell small, solid, ovately oblong, black-brown, girt with fulvous lines; spire acuminated; whorls six, convex, apical, grooved, last grooved below, ventricose, cauda umbilicated behind the columella; aperture ovate, patulous; white, lineated, thickened within, ridged.

DUNKER. Ind. Moll. p. 16. Pl. II. f. 33.

Hab. Benguela.

Species 23. (Mus. Brit.—Hanley.)

PLANAXIS VARIABILIS. *Pla. testâ parvâ, elongatâ, albâ, lineis spiralibus rubescentibus ornatâ, spirâ conicâ, rectilaterali, acuminatâ; anfractibus superioribus sulcatis, ultimo suprà infràque validè, medio leviter sulcato; aperturâ parvâ, brevi; columellâ infrà brunneo tinctâ, callo canalique posticis nullis.*

THE VARIABLE PLANAXIS. Shell small, elongated, white, ornamented with spiral reddish lines, spire conical, straight-sided, acuminated; upper whorls grooved, last grooved strongly above and below, slightly in the middle; aperture small, short; columella tinged with brown below; no posterior callus or canal.

SMITH. Proc. Zool. Soc. 1872, p. 44.

Hab. Fiji Islands. Var. China Seas.

Figure *b* represents the variety in the Collection of Sylvanus Hanley, Esq.

Species 24. (Mus. Brit.)

PLANAXIS VIRGATUS. *Pla. testâ elongatâ, fulvâ, lineis spiralibus paucis, et strigis longitudinalibus irregularibus ornatâ; spirâ acuminatim productâ; anfractibus octonis, convexiùsculis, superioribus sulcatis, ultimo infrà sulcato; aperturâ subovatâ, parvâ; labro acutè marginato; intùs incrassato, denticulato; callo canalique posticis nullis.*

THE STRIPED PLANAXIS. Shell elongated, fulvous, ornamented with few spiral lines and longitudinal irregular stripes, spire acuminately produced; whorls eight, rather convex, upper grooved, last grooved below; aperture subovate, small; outer lip sharp-edged; thickened within, denticulated; no posterior callus or canal.

SMITH. Proc. Zool. Soc. 1872, p. 44.

Hab. Fiji Islands.

Species 25. (Mus. Hanley.)

PLANAXIS STRIGATUS. *Pla. testâ parvâ, albâ, solidâ, spiraliter distanter rubro-lineatâ; spirâ acuminatâ, anfractibus novenis, superioribus sulcatis, penultimo tenuiter striato; ultimo infrà sulcato; aperturâ spiram longitudine æquanti; columellâ labroque albis vel pallidè violaceis; labro intùs incrassato, denticulato, margine acuto.*

THE STREAKED PLANAXIS. Shell small, white, solid; spirally distantly red-lined; spire acuminated, whorls nine, upper grooved, last finely striated; last grooved below; aperture equalling spire in length; columella and lip white or pale violet, outer lip thickened within, denticulated, margin sharp.

HANLEY. MS. in Coll.

Hab. Pacific.

Neither the *P. virgatus var.* so marked in the British Museum, nor the "*strigatus var.*" in Mr. Hanley's Collection seem to me to agree with the type of Mr. Smith's *P. virgatus*, but resemble each other, with the exception that the former has a little purple in the lips.

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26b

29a

29b

30a

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30b

G.B. Sowerby, del. et lith.

Vincent Brooks Day & Son Imp.

PLANAXIS.

PLATE IV.

Species 26. (Mus. Hanley.)

PLANAXIS PLANICOSTATUS. *Pla. testâ trochiformi, magnâ, solidâ, fuscâ, epidermide tenuiter rugatâ indutâ, costis planatis latis cinctâ, insterstitiis profundis; spirâ conicâ, anfractibus septenis ad suturam angustè angulatis; suturâ profundâ, ultimo magno, infra medium obscurissimè angulato; aperturâ subtrigonâ, columellâ latè planatâ, callo postico maximo, labro ad marginem tenui, crenulato, supernè depresso, intùs liris dentiformibus septenis armato, canali postico angusto elongato.*

THE FLAT-RIBBED PLANAXIS. Shell trochus-shaped, large, solid, brown, covered with a finely wrinkled epidermis, girt with flat, broad ribs; interstices deep; spire conical, whorls seven, narrowly angular at the suture; suture deep; last large, very obscurely angular below the middle; aperture subtrigonal, columella broadly flattened, posterior callus very large, outer lip thin, crenulated at the margin, depressed above, strengthened within with seven tooth-like ridges; posterior canal narrow, elongated.

SOWERBY. Append. Tank. Cal. p. 13, 1825.

Planaxis canaliculata. Duval.

Planaxis circinata. Lessen.

Hab. Galapagos Island and Panama.

Species 27. (Mus. Hanley.)

PLANAXIS TENUIS. *Pla. testâ tenui, elongatâ, politâ, semipellucidâ, albidâ, lineis rubris paucis distantibus cinctâ; spirâ elongatâ; anfractibus octonis, convexiùsculis, spiraliter leviter sulcatis, ultimo elongato, infrà validè sulcato et ventricoso; aperturâ brevi, angustâ, labro tenui, callo canalique posticis nullis.*

THE THIN PLANAXIS. Shell thin, elongated, polished, semipellucid, whitish, girt with few distant red lines; spire elongated; whorls eight, rather convex, spirally lightly grooved, last elongated, strongly grooved and ventricose below the middle, aperture short, narrow, outer lip thin, no posterior callus or canal.

SMITH. Proc. Zool. Soc. 1872. p. 45.

Hab. ——?

Species 28. (Mus. Brit.)

PLANAXIS INEPTUS. *Pla. testâ parvâ, pallidissimè fulvâ, supra suturam rubro lineatâ, spiraliter sulcatâ; spirâ elongatâ, anfractibus septenis, convexiùsculis, ultimo ventricoso, medio bilineato; aperturâ brevi, subrotundâ.*

THE UNIMPORTANT PLANAXIS. Shell small, very pale fulvous, with a red line above the suture, spirally grooved; spire elongated, whorls seven, rather convex; last ventricose, with two lines in the middle; aperture short, rather rounded.

GOULD. (*Inepta.*) Proc. Boston. Soc. Nat. Hist. 1860.

Hab. Kikaia Bay.

Species 29. (Fig. *a*, *b*, Mus. Brit.)

PLANAXIS ZONATUS. *Pla. testâ parvâ, politâ, solidâ, albidâ, supra suturam et medio infràque anfractûs ultimi lineâ rubrâ cinctâ; anfractibus septenis, ultimo subventricoso; aperturâ latâ, brevi; labro prope marginem incrassato, denticulato.*

THE BANDED PLANAXIS. Shell small, polished, solid, whitish, girt with a red line above the suture and in the middle and below the middle of the last whorl; whorls seven, last rather ventricose; aperture broad, short; outer lip thickened near the margin, denticulated.

A. ADAMS. Proc. Zool. Soc. 1851, p. 271.

Hab. Calapan, Philippines.

Species 30. (Fig. *a*, *b*, Mus. Hanley.)

PLANAXIS SAVIGNYI. *Pla. testâ magnâ, crassâ, breviter trochiformi, infra medium subangulatâ, omninò*

crebrè sulcatâ, griseo-fuscâ; strigis numerosis angustis, undulatis, longitudinalibus ornatâ; spirâ brevi; anfractibus quinis, brevibus, convexiùsculis; ultimo magno, supra medium tumidiùsculo; aperturâ subtrigonâ, labro intùs validè dentato, lirato, margine fusco, tenui, crenato, columellâ breviùsculâ, callo postico conspicuo.

SAVIGNYI'S PLANAXIS. Shell large, thick, shortly trochiform, slightly angular below the middle, numerously grooved all over, grey brown, ornamented with numerous narrow undulating longitudinal stripes; spire short; whorls five, short, rather convex; last large, rather tumid above the middle, aperture rather trigonal; outer lip strongly tooth-ridged within, margin broad, thin, crenated, columella rather short; posterior callus conspicuous.

DESHAYES. Mag. Zool. 1844. Pl. CIX.

Hab. Red Sea.

The sulci are more numerous than in *Planaxis sulcatus*, and not deeply cut.

Species 31. (Mus. Brit.)

PLANAXIS LINEOLATUS. *Pla. testa parvâ, densè spiraliter sulcatâ, rubro lineatâ, subventricosâ, spirâ acuminatâ, anfractibus convexiùsculis; aperturâ subrotundâ, columellâ tenui, valdè arcuatâ, labro intùs denticulato, prope marginem incrassato, margine rotundo.*

THE FINE-LINED PLANAXIS. Shell small, closely spirally grooved, lined with red, rather ventricose; spire acuminated, whorls rather convex; aperture rather round, columella thin, much arched, outer lip denticulated within, thickened near the margin, margin rounded.

GOULD. Otia Conch. p. 60.

Hab. Wilson's Island, near the Sandwich Islands.

Species 32. (Mus. Hanley.)

PLANAXIS LONGISPIRA. *Pla. testâ parvâ, elongatâ, angustâ, albidâ, medio ultimi anfractûs et infrà rubro bilineatâ; spirâ productâ, anfractibus convexiùsculis, lævibus, politis, ultimo basi sulcato; aperturâ parvâ, quam spira longe breviori; columellâ brevi, arcuatâ, pallidè violaceâ; labro crassiùsculo, callo postico nullo.*

THE LONG-SPIRED PLANAXIS. Shell small, elongated, narrow, whitish, with two red lines in the middle of the last whorl and below; spire produced, whorls rather convex, smooth, polished; last grooved at the base; aperture small, much shorter than spire; columella short, arched, pale violet; outer lip rather thick; no posterior callus.

SMITH. Proc. Zool. Soc. 1872, p. 45.

Hab. Chinese Seas.

34 a

33

34 b

35 a

36 a

36 b

35 b

37 a

37 b

38

G.B. Sowerby, del et lith.

Vincent Brooks Day & Son Imp.

PLANAXIS.

PLATE V.

Species 33. (Mus. Brit.)

PLANAXIS EBOREUS. *Pla. testâ albâ, parvâ, ovato-acuminatâ, ad apicem fulvâ; spirâ elevatâ, mucronatâ; anfractibus octonis, inferioribus convexis, spiraliter sulcatis, costis inter sulcis dimidiatis; aperturâ subovatâ; labro ad marginem acuto, brunneo maculato, intùs incrassato, denticulato; columellâ arcuatâ, callo postico parvo.*

THE IVORY PLANAXIS. Shell white, small, ovately acuminated, fulvous at the apex; spire raised, mucronated; whorls eight, lower convex, spirally grooved, ribs between the grooves divided; aperture subovate, outer lip sharp at the margin, spotted with brown, thickened and denticulated within; columella arched, posterior callus small.

SMITH. Proc. Zool. Soc. 1872, p. 42.

Hab. St. Thomas and St. Vincent, West Indies.

The ribs are divided by a spiral line in the centre.

Species 34. (Fig. *a*, *b*, Mus. Brit.)

PLANAXIS PUNCTO-STRIATUS. *Pla. testâ angustè pyramidatâ, lineis minutissimè puncto-striatis spiraliter cinctâ, lævi, pallidè fulvâ, maculis parvis subquadratis castaneis seriatim dispositis ornatâ; spirâ elongatâ, anfractibus senis, convexiùsculis, ultimo subventricoso; aperturâ brevi, subovatâ, anticè validè emarginatâ, margine labri maculato.*

THE PUNCTURE-STRIATED PLANAXIS. Shell narrowly pyramidal, spirally encircled with very minute puncture-striated lines, smooth, pale fulvous, ornamented with small square chestnut spots; spire elongated, whorls six, rather convex, last rather ventricose; aperture short, subovate, anteriorly strongly notched, margin of the outer lip spotted.

SMITH. MS. Mus. Brit.

Hab. ——?

Species 35. (Fig. *a*, *b*, Mus. Hanley.)

PLANAXIS BRASILIANUS. *Pla. testâ elongato-pyramidalis, lævi, albâ, crassissimâ, epidermide pilosâ indutâ; spirâ elevatâ, anfractibus septenis, superioribus frequenter griseo fasciatis, ultimo infra medium obtusè angulato; aperturâ parvâ, ovatâ, fulvâ; labro ad dorsum tumido, supra marginem deflexo, intùs valde incrassato denticulato; columellâ brevi, incrassatâ, arcuatâ, anticè productâ, canali antico elongato, extùs tumido.*

THE BRAZILIAN PLANAXIS. Shell elongate-pyramidal, smooth, white, very thick, covered with a velvety epidermis; spire raised, whorls seven, upper often banded with grey, last obtusely angular below the middle; aperture small, ovate, fulvous, outer lip tumid at the back, bent down above the margin, much thickened and denticulated within; columella short, thickened, arched, produced anteriorly, anterior canal lengthened, tumid outside.

LAMARCK. (Buccinum.) Anim. s. Vert. Vol. VII. p. 272.

Planaxis mollis. Sowerby.

Buccinum lævigatum. Wood.

Planaxis fulva. A. Adams.

Planaxis pigra. Forbes.

Hab. Brazil.

Species 36. (Fig. *a*, *b*, Mus. Hanley and Brit.)

PLANAXIS (Quoyia) MICHAUDI. *Pla. testâ pyramidatâ, elevatâ, lævigatâ, fuscâ, fulvo vel griseo longitudinaliter fasciatâ; spirâ elongatâ, conicâ; anfractibus septenis, convexiùsculis, ultimo infra medium angulato, super varicem canalis leviter spiraliter striato; aperturâ brevi, subtrigonâ, columellâ supernè quadratim excisâ, acutè unidentatâ, ad terminum truncatâ; labro intùs tenuiter lirato-denticulato; canali antico brevi, rotundo.*

MICHAUD'S PLANAXIS. Shell pyramidal, raised, smooth, brown, longitudinally striped with fawn or grey; spire elongated, conical; whorls seven, rather convex, last angular below the middle, lightly spirally striated above the varix of the canal; aperture short, subtrigonal, columella cut out in a square above, with a sharp tooth, truncated at the end; outer lip finely ridge-toothed; anterio canal short, round.

CROSSE and FISCHER. Journ. Conch. Vol. XI. p. 375.

Hab. Eastern Seas.

The variety in the British Museum is banded longitudinally with light grey, and that in M. Hanley's collection is of a more uniform brown colour. The shell is more slender than *Quoyia decollata*, which is deeply grooved.

Species 37. (Fig. *a*, *b*, Mus. Hanley.)

PLANAXIS (Quoyia) DECOLLATA. *Pla. testâ oblongo-pyramidatâ, spiraliter validè sulcatâ, subviridè fulvâ, fusco longitudinaliter strigatâ, sulcis prope suturam et supra varicem canalis majoribus; anfractibus lateraliter rectiùsculis, superioribus deciduis; aperturâ brevi, subtrigonâ, columellâ supernè quadratim excisâ, acutè unidentatâ, ad terminum truncatâ; labro intùs tenuiter lirato-denticulato; canali antico brevi, rotundo.*

THE DECOLLATED PLANAXIS. Shell oblong-pyramidal, spirally strongly grooved, greenish-fawn, longitudinally striped with brown, grooves larger near the suture and above the canal varix; whorls laterally rather straight, upper deciduous; aperture short, rather trigonal, columella cut out above in a square, with a sharp tooth; anterior canal short, rounded.

GRAY. Proc. Zool. Soc. 1847, p. 138.

Hab. New Guinea, Philippines.

Species 38. (Mus. Brit.)

PLANAXIS (Holcostoma) PILIGER. *Pla. testâ ovatâ, lævi, latè plumbeo fasciatâ; spirâ brevissimâ; aperturâ magnâ, ovatâ, canali postico elongato, sinuato, columellâ arcuatâ, infrà latâ, latè truncatâ, labro intùs leviter dentato, margine supernè flexuoso.*

THE HAIRY PLANAXIS. Shell ovate, smooth, broadly banded with plum-colour; spire very short; aperture large, oval, posterior canal elongated, sinuous, columella arched, broad below, broadly truncated, outer lip lightly toothed, margin flexuous above.

PHILIPPI. Zeitschrift für Malak. 1848, p. 164.

Holcostoma setigerum. A. Adams.

Hab. Mauritius.

PLANAXIS.

	Plate.	Species.
abbreviatus, *Pease.*	III.	19
acutus, *Krauss*	II.	9
acutus, Menke	II.	8
Albersii, Dunker	II.	10
areolatus, A. Adams. Not identified.		
ater, *Pease*	III.	18
atropurpureus, *Recluz*	II.	10
Brasilianus, *Lamarck*	V.	35
breviculus, *Deshayes*	I.	6
brevis, Quoy. Not identified.		
Bronni, Dunker	II.	14
Buccineus, A. Adams. Not identified.		
buccinoides, Deshayes	I.	4
canaliculata, Duval	IV.	26
castaneus, *Smith*	I.	2
cingulatus, *Adams*	II.	15
circinata, Lesson	IV.	26
crassispira, *Smith*	I.	3
decollata, *Gray*	V.	37
eboreus, *Smith*	V.	33
encaustieus, *Smith*	I.	1
fasciatus, Pease. Not identified.		
fulva, A. Adams	V.	35
Gouldii, Smith. Not identified.		
Henleyi, *Smith*	II.	12
Hermannseni, *Dunker*	III.	22
incisus, Philippi. Not identified.		
ineptus, *Gould*	IV.	28
labiosus, *Adams*	II.	14
lœvigatum, Wood	V.	35
lineatus, *Costa*	III.	20
lineolatus, *Gould*	IV.	31
longispira, *Smith*	IV.	32

	Plate.	Species.
Menkeanus, Dunker. Not identified.		
Michaudi, *Crosse* and *Fischer*	V.	36
Mollis, Sowerby	V.	35
nucleus, *Lamarck*	I.	7
Nicobaricus, Zelebor. Not identified.		
niger, *Quoy*	II.	13
nigritellus, *Forbes*	II.	8
obscurus, *A. Adams*	I.	5
obsoletus, Menke	II.	8
pediculare, Lamarck	III.	20
pediculus, Kuster (?)	II.	14
pigra, Forbes	V.	35
piliger, *Philippi*	V.	38
planicostata, *Sowerby*	IV.	26
plumbea, Pease	II.	14
puncto-striatus, *Smith*	V.	34
pyramidale, Lamarck	I.	4
Savignyi, *Deshayes*	IV.	30
semisulcata, Sowerby	I.	7
setigerum, A. Adams	V.	38
similis, *Smith*	II.	11
striatulus, *Philippi*	II.	16
strigatus, *Hanley*	III.	25
succinctus, *A. Adams*	III.	21
sulcatus, *Born*	I.	4
suturalis, *Smith*	III.	17
tœniatus, Philippi. Not identified.		
tenuis, *Smith*	IV.	27
undulata, Lamarck	I.	4
variabilis, *Smith*	III.	23
vittatus, *Smith*	III.	24
zonatus, *A. Adams*	IV.	29

MONOGRAPH

OF THE GENUS

VELORITA.

Thou jubilant abyss of ocean cry,
Alleluia!
Ye tracts of earth and continents reply,
Alleluia!—*Neale.*

1a.

1b.

1c.

2a.

2b.

G B Sowerby del et Lith

Vincent Brooks Day & Son Imp

VELORITA.

Genus VELORITA, *Gray*.

MOLLUSCUM ACEPHOLOPODUM, BIMUSCULOSUM, FLUVIATILE. *Testa crassâ, solidâ, æquivalvi, epidermide crassâ, nitenti indutâ; umbonibus a cardine separatis; cardine crasso, utrâque valvâ dentibus tribus cardinalibus divergentibus; dentibus lateralibus, antico breviùsculo, angulato, postico elongato. Pallii impressio posticè angulatim sinuosa. Ligamentum externum, magnum.*

MOLLUSC ACEPHALOPODOUS, BIMUSCULAR, FLUVIATILE. Shell thick, solid, equivalve, covered with a thick, shining epidermis; umboes separated from hinge. Hinge thick, with three diverging cardinal teeth in each valve; lateral teeth, anterior rather short, angular, posterior elongated. Impression of the mantle posteriorly, angularly sinuated. Ligament external, large.

The two species described are from Japan and Cochin, in India. The former is the well-known *Velorita cyprinoides*, and the latter recently described by Mr. Smith of the British Museum. We are unacquainted with the so-called *Velorita recurvata* of Valenciennes. The solidity of the shell, the very peculiarly angular front lateral tooth, and the separation by a small area of the umboes, are the characteristics of the genus.

Species 1. (Mus. Sowerby.)

VELORITA CYPRINOIDES. *Vel. testâ altissimâ, solidissimâ, tumidissimâ, valdè obliquâ, liris concentricis distantibus, plerùmque ad latera continuis rugatâ, intùs albâ, vel roseo violaceoque tinctâ; latere antico brevissimo, perpendiculari, infra umbones areâ subrotundâ, planulatâ; latere postico producto, infrà acuminato, angulato, subcarinato, post angulum planulato.*

THE CYPRINA-LIKE VELORITA. Shell very high, very solid, very tumid, very oblique, wrinkled with distant concentric ridges, for the most part continued to the sides, white, or tinged with rose or violet within; anterior side very short, perpendicular, with a rather rounded, flattened area; posterior side produced, acuminated below, angular, slightly keeled, flattened behind the angle.

GRAY. ——? MS. Brit. Mus.

Hab. Japan.

Species 2. (Mus. Brit.)

VELORITA COCHINENSIS. *Vel. testâ subovatâ, latâ, obliquâ, subcompressâ, liris concentricis distantibus, plerùmque posticè post medium discontinuis rugatâ, intùs salmoneâ et aurantiâ; latere antico brevi, ferè perpendiculari, infra umbones plaqulatâ; latere postico obliquè producto, vix carinato, angulato, post angulum planulato, ad terminum subtruncato.*

THE COCHIN VELORITA. Shell subovate, broad, oblique, subcompressed, wrinkled with distant concentric ridges, for the most part discontinued posteriorly behind the middle, salmon and orange within; posterior side obliquely produced, hardly keeled, angular, flattened behind the angle, truncated behind the middle.

HANLEY. Smith, Proc. Zool. Soc. 1875.

Hab. Cochin, Kinderpore, Madras.

The differences between this and the former species, consisting in the greater breadth and less elevated apex of the latter, the tendency of its wrinkles to stop near the anterior half of the shell, are more comparative than positive, and, in a number of specimens, some are found in which these characters are almost interchangeable.

MONOGRAPH

OF THE GENUS

PTEROPODA.

We float upon a wild and violent sea, each way, and move.

Shakspeare.

1 a.

2

3.

4.a.

5.a.

5.b.

4.b.

6.

7

1.b.

G.B. Sowerby del et lith.

Vincent Brooks, Day & Son, Imp.

PTEROPODA.

PLATE I.

Genus HYALÆA. *Lamarck.*

Testa hyalina, tenuissima, subglobosa, lateraliter appendiculata, symmetrica; apice nonspirali; aperturâ angustâ, lateraliter incisâ; labro marginato, plerùmque in rostrum producto.

Shell glassy, very thin, subglobose, with lateral appendages, symmetrical; apex non-spiral; aperture narrow, laterally incised; outer lip bordered, generally produced into a beak.

SYNONYM. *Cavolina Giceni.*

The Pteropoda are placed by authors, who have studied their peculiarities, between the Cephalopoda and the Gasteropoda. The name of the class is happily chosen to suggest the wing-like pair of flappers or fins which, placed on each side of the head, effect by their action the locomotion of the mollusc. The greater part of the species are common to all seas; a few being perhaps peculiar to the Atlantic, and a few to the Pacific. They can be seen in the evening or at night floating at the surface of the water in great numbers, but at sunrise they sink to various depths, and are seen no more till the luminary of day disappears from the horizon. It is said that each species has its own precise moment for retiring, and its own appointed depth to which to sink.

The shells of some of the genera are obliquely spiral; as Hemifusus and Chelitropis. Some are symmetrically spiral. Some have an operculum. Cymbulia, a boat-shaped symmetrical cartilage, but no shell. The form of the shell in *Hyalœa* bears a considerable resemblance to a symmetrical bivalve shell with the valves soldered together at the dorsal hinge.

Species 1. (Mus. Brit.)

HYALÆA UNCINATA. *Hya. testâ tenuissimâ, succineâ, tumidâ, posticè trispinosa, spinis lateralibus trigonis, acutis, spinâ terminali deflexâ, uncinatâ; aperturâ angustiùsculâ, labro angustè marginato, medio paulò producto.*

THE HOOKED HYALÆA. Shell very thin, amber, tumid, posteriorly three-spined, lateral spines three-sided, sharp terminal spine bent downwards, curved; aperture rather narrow, outer lip narrowly bordered, a little produced in the middle.

RANG. D'Orbigny. Voy. Amér. Mérid. Pl. V. f. 11–15.

Hab. Atlantic Ocean.

Distinguished from Hyalæa Trispinosa by the more pent-up form, and by the hooked character of the central spine.

Species 2. (Mus. ——? Copied.)

HYALÆA FLAVA. *Hya. testâ flavidâ, tenuissimâ, ovatâ, subcompressâ, posticè trispinosâ, spinis lateralibus subapproximatis, spinâ centrali elongatâ, aperturâ angustâ, labro bilobato.*

THE YELLOW HYALÆA. Shell flavid, very thin, oval, subcompressed, three-spined posteriorly; lateral spines rather approximate, central spine long; aperture narrow, outer lip bilobate.

D'ORBIGNY. Voy. Amér. Mérid. Pl. V. f. 21–25.

Hab. Atlantic Ocean.

Distinguished from Hyalæa trispinosa by its oval and more compressed form.

Species 3. (Mus. Brit.)

HYALÆA AFFINIS. *Hya. testâ densè fuscâ, quam H. tridentata angustiorâ, magis rotundâ, rostro aperturæ producto, bilobato.*

THE RELATED HYALÆA. Shell deep brown, narrower than *Hyalœa tridentata*, the rostrum of the mouth produced, bilobate.

D'ORBIGNY. Voy. Amér. Mérid. Pl. V. f. 6–10.

Hab. Atlantic Ocean.

By the character of the shell alone the species would scarcely be distinguishable from the common species, and for this reason the writer has confined himself to the above very short comparative description.

Species 4. (Mus. Brit., &c.)

HYALÆA TRIDENTATA. *Hya. testâ intensè fuscâ, tenui, infrà pallidiori, posticè acutè trispinosâ; spinis lateralibus alæformibus, spinâ terminali rectâ, disco inferiori subtrigono, aperturam versus divaricatim subtrilobato; disco superiori globoso, ad latera marginato; aperturâ trigonâ, labro rostrato, margine subquadrilobato.*

THE THREE-SPINED HYALÆA. Shell deep brown, thin, rather paler underneath, posteriorly sharply three-spined, lateral spines wing-shaped, terminal spine straight, lower disc subtrigonal to subtrilobate towards the aperture; upper disc globose, bordered at the sides; aperture trigonal, outer lip beaked, margin slightly four-lobed.

FORSKAL (Cavolina).

Hyalæa papilionacea. Bory St. Vincent.

Hyalæa Forskalii. D'Orbigny.

Hyalæa Pangii. Deshayes.

Hab. Mediterranean. Great Britain?

It is probable that the variety, fig. 6, with white border and appendages, may be the *H. papilionacea* of St. Vincent.

Species 5. (Mus. Brit.)

HYALÆA CUMINGII. *Hya. testâ trispinosâ, pallidâ, tenuissimâ, iridescenti, nebulosâ, vel pallidè succineâ, quam H. trispinosa magis oblongâ, spinis lateralibus magis approximatis, rostro subtrigono, producto.*

CUMING'S HYALÆA. Shell three-spined, pale, very thin, iridescent, clouded, or pale amber, more oblong than *Helix trispinosa*, lateral spines more approximated, beak subtrigonal, produced.

DESHAYES. MS. Mus. Cuming.

Hyalæa nebulosa. Deshayes (var.)

Hab. ——?

Of a more oblong form and lighter texture than *H. trispinosa*, but the difference is not very obvious. There is something in the texture of the pale variety giving a cloudy iridescence, which may, however, indicate a real specific distinction.

Species 6. (Fig. *a*, *b*, Mus. Brit.)

HYALÆA GLOBULOSA. *Hya. testâ trispinosâ, ovatâ, ventricosâ, albâ, angustiùsculâ, disco ventrali obliquè conico, ad apicem rotundè elevato, spinis lateralibus obtusis, subapproximatis, spinâ apicali deflexâ, truncatâ, perforatâ; aperturâ angustè semilunari, labro breviter marginato.*

THE GLOBOSE HYALÆA. Shell three-spined, ovate, ventricose, white, rather narrow; ventral disc obliquely conical, roundly raised at the apex, lateral spines obtuse, somewhat approximate, apical spine bent downwards, truncated, perforated; aperture narrowly semilunar, outer lip shortly marginated.

RANG. Proc. Zool. Soc.

Hab. —— ?

Species 7. (Fig. *a*, *b*, Mus. Brit.)

HYALÆA GIBBOSA. *Hy. testâ trispinosâ, ovatâ, ventricosâ, albâ, angustiùsculâ, elongatâ, disco ventrali obliquè conico, acuminatim elevatâ, ad angulum elevatum rugatâ; spinis lateralibus approximatis, spinâ centrali elongatâ, leviter deflexâ.*

THE GIBBOUS HYALÆA. Shell three-spined, ovate, ventricose, white, rather narrow, elongated; ventral disc obliquely conical, acuminately elevated, wrinkled at the raised angle; lateral spines approximated, central spine elongated, slightly deflected.

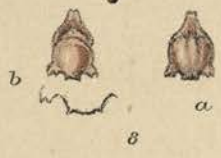
RANG. D'Orbigny, Voy. Amér. Mérid.

Hab. —— ?

This and the preceding species are swelled and raised at the ventral disc, forming an oblique cone, leaning towards the aperture in each case. In Hyalæa globulosa the apex of the cone is rounded. In H. gibbosa it is raised into an acuminated strongly-wrinkled beak.

Pteropoda Pl. II.

(Hyalœa)



8

9

10

11 a

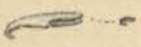
12 a

12 b

11 b

I

13 a



13 b

a 14 b

G. B. Sowerby. del et lith.

Vincent Brooks Day & Son Imp

PTEROPODA.

PLATE II.

HYALÆA.

Species 8. (Fig. *a*, *b*, Mus. Sowerby.)

HYALÆA OBTUSA. *Hya. testâ parvâ, tenuissimâ, pallidissimè succineâ, hyalinâ; disco ventrali brevi, rotundo; spinis lateralibus brevibus, duplicatis, apice centrali truncato, utrinque vix dentato, aperturâ trigonâ, labro producto.*

THE OBTUSE HYALÆA. Shell small, very thin, very pale amber, glassy; ventral disc short, rounded; lateral spines short, double, central apex truncated; just perceptibly dentated on each side; aperture trigonal, outer lip produced.

SOWERBY.

Hab. —— ?

The side appendages are smaller, and the bifid denticles more obtuse than in *Hyalina longirostris*, and the central apex broader and more truncated.

Species 9. (Mus. Sowerby.)

HYALÆA MINUTA. *Hya. testâ minutissimâ, globosâ, subcinereâ, posticè angustatâ, processibus lateralibus minutè unidentatis, apice centrali producto, latè truncato, utrinque minutissimè unidentato; aperturâ angustè semilunari; margine simplici, reflexo.*

THE MINUTE HYALÆA. Shell very minute, globose, rather ashy, posteriorly narrowed, lateral processes with a minute tooth, central apex produced, broadly truncate, with a single very minute tooth on each side; aperture narrowly semilunar, with a simple reflex margin.

SOWERBY.

Hab. —— ?

Species 10. (Mus. Sowerby.)

HYALÆA INTERMEDIA. *Hya. testâ parvâ, latâ, albâ, pellucidâ, posticè subcompressâ, quadridentatâ, dentibus lateralibus trigonis, acutis, dentibus ad apicem parvis, acuminatis; apice centrali subproducto, truncato; aperturâ angustâ, margine simplici, reflexo.*

THE INTERMEDIATE HYALÆA. Shell small, broad, white, pellucid, posteriorly rather compressed, with four teeth; lateral teeth trigonal, acute, teeth at the apex small, acuminated; central apex rather produced, truncated; aperture narrow, margin simple, reflected.

SOWERBY.

Hab. —— ?

Larger, more compressed at the sides, and less globose than *H. minuta*. Smaller, and more contracted anteriorly than *H. quadridentata*.

Species 11. (Fig. *a*, *b*, Mus. Brit.)

HYALÆA LIMBATA. *Hya. testâ pallidè lilacinâ vel fuscâ, trigonâ, disco ventrali tumido, tenuiter lirato, apice angustè subtruncato, processibus lateralibus alatis, trigonis, acuminatis, acutè tridentatis; aperturâ subtrigonâ, labio interno angustè reflexo; labro longè producto, leviter elevato, rostrato; rostro ad terminum bilobato; margine medio subcontracto.*

THE BORDERED HYALINA. Shell pale lilac or brown, trigonal, ventral disc tumid, finely ridged, apex narrowly rather truncated, lateral processes winged, trigonal, acuminated, sharply tridentate; aperture subtrigonal; inner lip narrowly reflected; outer lip much produced, slightly elevated, beaked, slightly contracted in the middle.

D'ORBIGNY. Voy. Amér. Mérid. Pl. VI. f. 11, 15.

Hab. Atlantic Ocean.

Species 12. (Fig. *a*, *b*, Mus. Brit.)

HYALÆA LONGIROSTRIS. *Hya. testâ fuscâ, vel albâ, versus aperturam fusco suffusâ, disco ventrali tumido, rotundo, tenuiter lirato, apice angustè subtruncato, processibus lateralibus alâtis, trigonis, bidentatis; aperturâ subtrigonâ, labio interno*

angustè reflexo, labro longè producto, validè elevato, rostrato, rostro ad terminum bilobato; margine medio coarctato.

THE LONG-BEAKED HYALÆA. Shell brown, or white, suffused with brown towards the aperture; ventral disc tumid, rounded, finely-ridged, apex narrowly subtruncated, lateral processes winged, trigonal, bidentate; aperture subtrigonal; inner lip narrowly reflected, outer lip much produced, strongly raised, beaked; beak two-lobed at the end; margin strongly contracted in the middle.

LESUEUR. D'Orbigny, Voy. Amér. Mérid. Pl. VI. f. 12.

Hab. Atlantic Ocean.

It is with some hesitation that the writer adopts D'Orbigny's distinction between this and the preceding species. The rostrum seems to be more distinctly contracted at the base, and more suddenly upturned in *H. longirostris* than in *H. limbata*, while the lateral alæ are more spread and acuminately produced in the latter species, giving the shell altogether a more triangular appearance.

Species 13. (Fig. *a*, *b*, Mus. —— ? Copied.)

HYALÆA LÆVIGATA. *Hya. testâ discoideâ, compressâ, minutâ, albâ; processibus lateralibus cuneatis, apice producto, acutè uncinato; aperturâ ad processus continuatâ, labiis subæqualibus.*

THE SMOOTH HYALÆA. Shell discoidal, compressed, minute, white; lateral processes cornered, apex produced, sharply hooked; aperture continued to the processes, lips nearly equal.

D'ORBIGNY. Voy. Amér. Mérid. Pl. VII. f. 15–19.

Hab. —— ?

A flat white species of *Hyalæa* (?) very simple in form.

Species 14. (Fig. *a*, *b*, Mus. Brit.)

HYALÆA QUADRIDENTATA. *Hya. testâ succineâ, oblongâ, tumidâ, posticè subangustatâ, processibus lateralibus acutè unidentatis, apice producto, angusto, ad terminum rotundo, utrinque prope terminum unidentato, aperturâ angustâ, semilunari, margine simplici, reflexo.*

THE FOUR-TOOTHED HYALÆA. Shell amber, oblong, tumid, posteriorly rather narrowed, lateral processes sharply unidentate, apex produced, narrow; rounded at the end, narrow, with a tooth at each side near the end; aperture narrow, semilunar, margin simple, reflected.

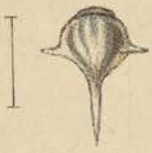
LESUEUR. D'Orbigny, Voy. Amér. Mérid. Pl. V. f. 11–15.

Hab. —— ?

15. a.

20. a.

21. a.



15. b.

17

18.

16. a

19. a.

19. b

20 b

21. b.

16. b.

G.B. Sowerby, del et lith.

Vincent Brooks, Day & Son, Imp.

PTEROPODA.

PLATE III.

HYALÆA. DIACRIA. ATLANTA.

Species 15. (Fig. *a*, *b*, Mus. Brit.)

HYALÆA (Diacria) TRISPINOSA. *Hya. testâ compressâ, tenuissimâ, albâ, fusco in partibus suffusâ, obliquè subquadratâ, trispinosâ; spinis lateralibus brevibus, acutis, utrinque ad angulum dispositis; spinâ apicali elongatâ, attenuatâ, acuminatâ; disco ventrali convexo, disco dorsali transversè lirato, trilobato; aperturâ angustâ, marginibus subreflexis.*

THE THREE-SPINED HYALÆA. Shell compressed, very thin, white, suffused with brown in parts, oblique, rather square, three spined; lateral spines short, sharp, placed at the angle on each side, apical spine elongated, attenuated, acuminated; ventral disc convex, dorsal disc transversely ridged, trilobate; aperture narrow, margins somewhat reflected.

LESUEUR. D'Orbigny, Voy. Amér. Mérid. Pl. VII. f. 1–5.

Hab. Atlantic Ocean.

Species 16. (Fig. *a*, *b*, Mus. Brit.)

HYALÆA (Diacria) MUCRONATA. *Hya. testâ latâ, compressâ, albâ, fusco prope aperturam pictâ, latè subquadratâ, trispinosa; spinis lateralibus remotis, alatis, depressis, spinâ apicali latiùsculâ, breviùsculâ; disco ventrali ferè lævigato, disco dorsali lobato, validè rugato; aperturâ angustâ, labiis reflexis, fuscis, angustis.*

THE SHARP-POINTED HYALÆA. Shell broad, compressed, white, painted with brown near the aperture, broadly subquadrate, three-spined; lateral spines remote, winged, depressed; apical spine rather wide, rather short, frequently truncated; ventral disc nearly smooth, dorsal disc lobed, strongly wrinkled; aperture narrow, lips reflected, brown, narrow.

LESUEUR. D'Orbigny, Voy. Amér. Mérid. Pl. VII. f. 6–10.

Hab. Atlantic Ocean.

With broader disc and wider alæ than in Hyalæa trispinosa. The apical spine is also broader and shorter.

Species 17. (Fig. *a*, *b*, Mus. Sowerby.)

HYALÆA INFLEXA (Diacria). *Hya. testâ parvâ, albâ, subtrigonâ, trispinosâ, spinis lateralibus elevatis, brevibus; spinâ apicali productâ, uncinatâ; aperturâ usque ad spinas laterales incisâ, latiùsculâ, labio interno reflexo, labro producto, margine lobato.*

THE INBENT HYALÆA. Shell small, white, subtrigonal, three-spined; lateral spines raised, short; apical spine produced, hooked; aperture slit as far as the lateral spines, rather broad; inner lip reflected, outer lip produced, margin lobed.

LESUEUR. D'Orbigny, Voy. Amér. Mérid. Pl. IX. f. 16–20.

Hab. Atlantic Ocean.

Species 18. (Fig. *a*, *b*, Mus. Brit.)

HYALÆA LABIATA (Diacria). *Hya. testâ albâ, elongato-subtrigonâ, trispinosâ, subcompressâ; disco dorsali anticè producto, angustè rostrato, medio angulato; disco ventrali convexo, lævigato, spinis lateralibus retrorsis, acutis, spinâ apicali breviùsculâ, deflexâ, uncinatâ; aperturâ trigonâ, labro producto, angulato, labio interno elevatim reflexo.*

THE LIPPED HYALÆA. Shell white, elongated, subtrigonal, three-spined, subcompressed; dorsal disc produced anteriorly, narrowly beaked, with a central angle; ventral disc convex, smooth, lateral spines turned backwards, sharp, apical spine rather short, bent downwards, hooked; aperture three-cornered, outer lip produced, angular, inner lip raised or reflected.

D'ORBIGNY. Voy. Amér. Mérid. Pl. VI. f. 21–25.

Hab. Atlantic Ocean.

Species 19. (Fig. *a*, *b*, Mus.——? Copied.)

HYALÆA DEPRESSA (Diacria). *Hya. testâ minutâ, albâ, subtrigonâ, compressâ, processibus lateralibus ad rimam aperturæ projectis; aperaturâ profundè semilunari, simplici; labro producto, labio interno leviter elevato, apice longè producto ad terminum acuminato, uncinato.*

The depressed Hyalæa. Shell minute, white, subtrigonal; compressed; lateral processes projected to the slit of the mouth; aperture deeply semilunar, simple; outer lip produced, inner lip slightly raised; apex much produced, acuminated at the end, and hooked.

D'Orbigny. Voy. Amér. Mérid. Pl. VII. f. 11–14.

Hab. ——?

Genus ATLANTA, *Lesueur.*

(*Limacina*, Cuvier.)

Testa nautiliformis, semicartilaginosa, spirâ planorbulâ, anfractibus partim celatis, ultimo tenuiter carinato.

Shell nautilus-shaped, half cartilaginous, spire flat-circular; whorls partly hidden, last with a thin keel.

Species 20. (Fig. *a*, *b*, Mus. Brit.)

Atlanta Peronii. *Atl. testâ compressâ, tenuissimâ, hyalinâ; anfractibus apparentibus acutè angulatis; aperturâ angustâ; margine externo acutissimè angulato; carinâ latâ, tenuissimâ.*

Peron's Atlanta. Shell compressed, very thin, hyaline; whorls visible, sharply angular; aperture narrow, its outer edge very acutely angular; keel broad, very thin.

Lesueur Les. et Blain. D'Orb. Amér. Mérid.

Hab. Atlantic.

Species 21. (Fig. *a*, *b*, Mus. Brit.)

Atlanta (Oxygyrus) Kerandrenii. *Atl. testâ ventricosâ, membranaceâ; anfractibus paucis, apicalibus celatis, ultimo, extùs, versus apicem latè carinato; aperturâ latâ, margine externo rotundo.*

Kerandren's Atlanta. Shell ventricose, membranaceous; whorls few, apical hidden, last towards the aperture outside broadly keeled; aperture broad, outer margin rounded.

Rang. Adams, Genera, p. 92.

Hab. ——?

About 15 or 16 species of Atlanta and Oxygyrus have been described, but we have not the opportunity of presenting more than two representative species.

a. *22.* *b.*

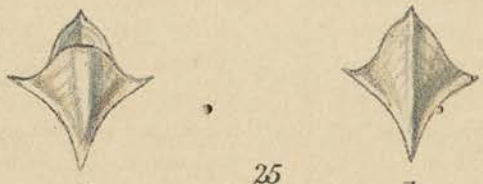
23.a.

23.b

24.

26.a.

26.b.



a. *25* *b.*

PTEROPODA.

PLATE IV.

Genus CLEODORA. *Péron and Lesueur.*

Testa hyalina, pyramidata, haud lateraliter appendiculata, tricuspidata; aperturâ trigonâ, labro producto, rostrato.

Shell hyaline, pyramidal, without lateral appendages, three-spired; aperture trigonal, outer lip produced, beaked.

Of the few species composing this genus the most exquisitely beautiful is the *Cleodora cuspidata.*

Species 22. (Fig. *a*, *b*, Mus. Brit.)

CLEODORA AUSTRALIS. *Cle. testâ angustè pyramidatâ, trigonâ, dorso lateribusque carinato-angulatis, spinis lateralibus brevibus, versus aperturam elevatis, spinâ apicali acuminatâ, aperturâ trigonâ, disco ventrali concavo.*

THE AUSTRALIAN CLEODORA. Shell narrowly pyramidal, trigonal, back and sides with carinated angles, lateral spines short, raised towards the aperture, apical spine acuminated, aperture trigonal, ventral disc concave.

D'ORBIGNY. Voy. Amer. Mérid. T. VIII. f. 12–14.

Hab. Australia.

Much narrower than Cleodora pyramidata, which it otherwise resembles.

Species 23. (Fig. *a*, *b*, Mus. Brit.)

CLEODORA CUSPIDATA. *Cle. testâ oblongâ, trigonâ, transversè sinuatim liratâ, lateribus dorsalibus trigonis, carinâ dorsali acutâ, in rostrum productâ, carinis lateralibus brevibus, longispinosis; spinâ apicali acutissimâ, disco ventrali medio convexo.*

THE POINTED CLEODORA. Shell oblong, trigonal, transversely sinuously ridged, dorsal sides trigonal, dorsal keel sharp, produced into a beak, lateral keels short, with long spines; apical spine very sharp, ventral disc convex in the middle.

QUOY. Voy. Astro. II. Pl. 27, f. 1–5.

Hab. Atlantic Ocean.

The spines are long, and bend upwards from the inverted apex, rather near which they take their rise.

Species 24. (Mus. ——? Copied.)

CLEODORA LOBATA. *Cle. testâ latè pyramidatâ, trigonâ, transversè sinuatim liratâ; spinis lateralibus supra medium elevatis sursum acclivibus; labro producto, margine lobato.*

THE LOBED CLEODORA. Shell broadly pyramidal, trigonal, transversely sinuously ridged; lateral spines raised above the centre, sloped upwards; outer lip produced, margin lobed.

SOWERBY.

Hab. Atlantic Ocean.

From the figure in D'Orbigny's work the writer concludes this to be a distinct species, although given as a variety of Cleodora pyramidata. It has veritable spines at the sides, which are pointed upwards, and the dorsal surfaces are longitudinally ridged, with correspondingly lobed labial margin.

Species 25. (Fig. *a*, *b*, Mus. Sowb.)

CLEODORA PYRAMIDATA. *Cle. testâ latissimè pyramidatâ, trigonâ, lævigatâ, facie ventrali ad latera concavâ, medio angustè tumidâ, carinâ dorsali acutâ, in rostrum acuminatum productâ, angulis lateralibus expansis, acutè subspinosis, medianis, horizontalibus.*

THE PYRAMIDAL CLEODORA. Shell very broadly pyramidal, trigonal, smooth, ventral surface concave at the sides, narrowly tumid in the middle, dorsal keel sharp, produced into an acuminated rostrum; lateral angles expanded, sharply subspinose, central, horizontal.

QUOY. Voy. de l'Astrolabe, Vol. II. Pl. XXVII. f. 7–13.

Hab. Atlantic Ocean.

Genus BALANTIUM. *Leach.*

Testa triangularis, hyalina, compressa, longitudinaliter undata, apertura angusta, transversa, ad angulos non rimata.

Shell triangular, hyaline, compressed, longitudinally waved, aperture narrow, transverse, not slit at the angles.

This genus does not appear to differ very essentially from *Cleodora*. The angles of the aperture are not slit, and the outer lip is not produced. Several species are enumerated by authors, but with the exception of the one given below they are not known to the present writer.

Species 26. (Fig. *a*, *b*, Mus. Brit.)

BALANTIUM RECURVUM. *Bal. testâ oblongo-triangulari, utrinque transversè undulatim liratâ, facie dorsali longitudinaliter tri-liratâ; facie ventrali ad latera concavâ, medio latè tumido; marginibus lateralibus acutè carinatis; spinâ apicali acutâ, recurvâ; aperturâ semilunari, marginibus undulatis.*

THE RECURVED BALANTIUM. Shell oblong-triangular, transversely wavily ridged across; dorsal surface with three longitudinal ridges; ventral surface concave at the sides, broadly swelled in the middle; lateral margins sharply keeled; apical spine sharp, bent backwards; aperture semilunar, with undulating margins.

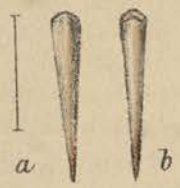
CHILDREN. Mus. Brit.

Cleodora Balantium. Rang.

Hab. Australia.

Vide notice and figures of several other species of Balantium at Plate VI.

27.



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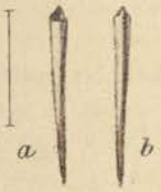

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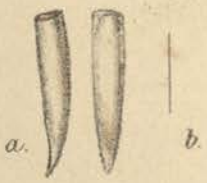

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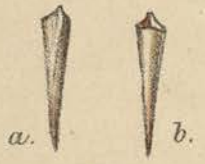

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37.

38

PTEROPODA.

PLATE V.

Genus TRIPTERA. *Quoy.*

Testa tubulosa, subcompressa, versus apicem leviter bulbiformis, ad apicem carinâ circulari cincta; aperturâ reniformi.

Shell tubular, rather compressed, slightly bulbiform towards the apex, surrounded at the apex with a circular keel; aperture reniform.

Synonym. *Cuvieria.* Rang.

Species 27. (Mus. Brit.)

TRIPTERA COLUMNELLA. *Tri. testâ albâ, semipellucidâ, versus aperturam subcompressâ, subangustatâ, apice rotundo.*

THE LITTLE PILLAR TRIPTERA. Shell white, semipellucid, rather compressed and narrowed towards the aperture; apex rounded.

RANG. D'Orbigny, Voy. Amér. Mérid., t. 8, f. 35–39.
Creseis obtusa. Rang.
Hab. —— ?

The one or two other recorded species are not found in the collections.

Genus CRESEIS. *Rang.*

Testa elongata, tubularis, pyramidata, spiniformis, hyalina.

Shell elongated, tubular, pyramidal, spine-shaped.

Synonym. *Styliola.* Lesueur.

Species 28. (Fig. *a*, *b*, Mus. —— ?)

CRESEIS ROTUNDA. *Cre. testâ subrotundâ, latiùsculâ, elongatâ, fere rectâ, transversè tenuissimè striatâ; apice attenuato, acuminato, leviter arcuato; aperturâ rotundâ.*

THE ROUNDED CRESEIS. Shell rather rounded, rather wide, elongated, nearly straight, transversely very finely striated; apex attenuated, acuminated, slightly arched; aperture rounded.

SOWERBY.
Hab. —— ?

We do not find this species elsewhere described.

Species 29. (Fig. *a*, *b*, Mus. Brit.)

CRESEIS ACICULATA. *Cre. testâ angustâ, lævigatâ, attenuatâ, acuminatâ, dorso angulatâ; aperturâ subtrigonâ, labro producto, unispinoso.*

THE ACICULATED CRESEIS. Shell narrow, smooth, attenuated, acuminated, angular at the back; aperture rather trigonal, outer lip produced with a spine.

D'ORBIGNY. Tab. VIII., f. 29–31.
Hab. Atlantic Ocean.

Species 30. (Fig. *a*, *b*, Mus. Brit.)

CRESEIS STRIATA. *Cre. testâ latiùsculâ, transversè rugatâ; aperturâ subrotundâ; apice retrorsùm leviter arcuato, acuminato.*

THE STRIATED CRESEIS. Shell rather broad, transversely wrinkled; aperture rather round; apex slightly curved backwards, acuminated.

RANG. D'Orbigny, Voy. Amér. Mérid. Pl. VIII. f. 23–25.
Hab. Atlantic Ocean.

Species 31. (Fig. *a*, *b*, Mus. Sowerby.)

CRESEIS CORNIFORMIS. *Cre. testâ breviùsculâ, rotundâ, lævigatâ; aperturâ rotundâ, apice acuminato, validè recurvo, uncinato.*

THE HORN-SHAPED CRESEIS. Shell rather short, rounded, smooth; aperture rounded, apex acuminated, strongly recurved, hooked.

D'ORBIGNY. Voy. Amér. Mérid. Pl. VIII. f. 21.
Hab. Atlantic Ocean.

Species 32. (Fig. *a*, *b*, Mus. —— ? Copied.)

CRESEIS VIRGULA. *Cre. testâ latiùsculâ, rotundâ, lævigatâ; aperturâ rotundâ, apice attenuato, acuminato, leviter arcuato.*

THE TWIG CRESEIS. Shell rather broad, rounded, smooth; aperture rounded, apex attenuated, acuminated, slightly arched.

RANG. D'Orbigny, Voy. Amér. Mérid. Pl. VIII. f. 36.
Hab. Atlantic Ocean.

Species 33. (Fig. *a*, *b*, Mus. Brit.)

CRESEIS SPINIFERA. *Cre. testâ elongatâ, lævigatâ, acuminatâ, dorso subspiraliter carinatâ; carinâ ad aperturam in spinam desinenti; apice valde attenuato.*

THE SPINE-BEARING CRESEIS. Shell elongated, smooth, acuminated, with a subspiral keel at the back; keel ending in a spine at the aperture; apex much attenuated.

RANG. Sowerby, Gener. of Shells. Pteropoda, f. 4.
Cleodora subula. Quoy.
Hab.——?

In this species and in *Creseis aciculata* the dorsal keel crosses the tube diagonally, so as to indicate a slight tendency to the spiral form.

Genus SPIRIALIS. *Souleyet.*

Testa hyalina, fusiformis, vel heliciformis, sinistralis. Operculum ovatum paucispirale.

Shell glassy, fusiform or heliciform, sinistral. Operculum ovate, few-whorled.

Syn. (Pars.) HETEROFUSUS. Fleming.

Species 34. (Mus. Jeffreys.)

SPIRIALIS FLEMINGII. *Spi. testâ subheliciformi, albâ, ventricosâ; spirâ conicâ, anfractibus quinis, ultimo globoso; aperturâ subpyriformi, anticè productâ, acuminatâ, columellâ rectiusculâ.*

FLEMING'S SPIRIALIS. Shell subheliciform, white, ventricose; spire conical, whorls five, last globose, aperture somewhat pyriform, anteriorly produced, acuminated; columella rather straight.

FORBES. Forbes and Hanley, British Mollusca.
Hab. North British seas.

Species 35. (Mus. Jeffreys.)

SPIRIALIS MACANDREI. *Spi. testâ fusiformi, albâ, lævigatâ; spirâ pyramidatâ, elevatâ; anfractibus septenis, convexiusculis; aperturâ pyriformi, anticè acuminatâ; columellâ elongatâ; leviter tortuosâ.*

MACANDREW'S SPIRIALIS. Shell fusiform, white, smooth, spire pyramidal, raised; whorls seven, rather convex; aperture pyriform, acuminated anteriorly; columella elongated, slightly tortuous.

FORBES and HANLEY. British Mollusca.
Hab. Ireland.

Species 36. (Mus. ——?)

SPIRIALIS ROTUNDA. *Spi. testâ subdepressâ, heliciformi, spirâ brevi; anfractibus trinis, ultimo ventricoso, magno, latè umbilicato; aperturâ obliquè ovatâ.*

THE ROUNDED SPIRIALIS. Shell subdepressed, heliciform, spire short, whorls three; last ventricose, large, broadly umbilicated; aperture obliquely oval.

D'ORBIGNY. Voy. Amér. Mérid. Moll., Pl. XIII, f. 16.
Hab. Atlantic Ocean.

Species 37. (Mus. ——?)

SPIRIALIS JEFFREYSII. *Spi. testâ depressâ, discoideâ, spirâ brevissimâ, ultimo lato, rotundo, latè umbilicato.*

JEFFREY'S SPIRIALIS. Shell depressed, discoidal; spire very short, last broad, rounded, broadly umbilicated.

FORBES and HANLEY. Brit. Moll.
Hab. British Channel.

Species 38. (Mus. ——?)

SPIRIALIS VENTRICOSA. *Spi. testâ globosâ, albâ, anfractibus quaternis, ultimo maximo, haud umbilicato; aperturâ breviter subpyriformi, anticè angulatâ; columellâ tenuissima.*

THE VENTRICOSE SPIRIALIS. Shell globose, white; whorls four, last very large, not umbilicated; aperture shortly rather pyriform; anteriorly angular; columella very thin.

SOULEYET. Voy. de la Bonite. Moll. Pl. XIII. f. 15.
Hab. Atlantic Ocean.

Pteropoda Pl. VI.

Spirialis, Limacina.

Chelicropis, Balantium.

40.

39.

41.

42.

43.

44.

45a

46.

47.

45.b.

G.B. Sowerby del. et lith.

Vincent Brooks, Day & Son. Imp.

PTEROPODA.

PLATE VI.

Species 39. (Mus. Sowerby.)

SPIRIALIS AUSTRALIS. *Spi. testâ fusiformi, hyalinâ, lævigatâ; spirâ elatâ, conicâ, anfractibus quinis, ultimo ventricoso; aperturâ pyriformi; columellâ acuminatâ, productâ; labro medio sinuato.*

THE AUSTRALIAN SPIRIALIS. Shell fusiform, hyaline, smooth; spire raised, conical, whorls five, last ventricose; aperture pyriform, columella acuminated, produced; outer lip sinuated in the middle.

SOULEYET. Voy. Bonite. Moll., Pl. XIII.

Hab. Australian seas.

Species 40. (Mus. Brit.)

SPIRIALIS ARCTICA. *Spi. testâ subdepresso-globosâ, spirâ parvâ, anfractibus trinis, brevissimis, ultimo magno, umbilicato; aperturâ magnâ, columellâ rectâ.*

THE ARCTIC SPIRIALIS. Shell subdepressed-globose; spire small, whorls three, very short, last large, umbilicated; aperture large, columella straight.

FABRICIUS. (Limacina.)

Limacina helicialis. Lamarck.

Hab. Greenland.

The writer scarcely sees any reason for separating the heliciform from the fusiform, sinistral, spiral shells of these Pteropoda.

Species 41. (Mus. —— ?)

SPIRIALIS CLATHRATUS. *Spi. testâ fusiformi, hyalinâ, obliquè puncturato-striatâ, spirâ brevissimâ, anfractibus paucis, ultimo inflato; aperturâ oblongâ; columellâ elongatâ, tenui, acuminatâ.*

THE LATTICED SPIRIALIS. Shell fusiform, hyaline, obliquely puncture-striated; spire very short, whorls few, last inflated; aperture oblong, columella elongated, thin, acuminated.

SOULEYET. Ed. et Soul. Voy. Bonite. Moll. Pl. XIII. f. 17.

Hab. Atlantic.

Species 42. (Mus. Brit.)

(*Atlanta.*)

ATLANTA INFLATA. *Atl. testâ albâ, nautiloideâ, ferè symmetricâ, anfractibus apicalibus celatis, ultimo umbilicato, extùs subcarinato; aperturâ subtrigonâ, labro in processu elongato linguiformi desinenti; operculo tenuissimo, hyalino.*

THE INFLATED ATLANTA. Shell white, nautilus-shaped, nearly symmetrical; apical whorls hidden; last umbilicated slightly, keeled on the outer side; aperture subtrigonal; outer lip terminating in a long tongue-shaped process.

RANG and SOULEYET. Mon. Pterop., Pl. XIV. f. 4.

Heliconides. D'Orbigny.

Hab. —— ?

SINUSIGERA.

Genus SINUSIGERA. *D'Orbigny.*

Testa subglobosa, medio anfractûs ultimi sulcata, aperturâ subovatâ, labro sinuato, reflexo, bilobato. Operculum ignotum.

Shell subglobose, sulcated in the middle of the last whorl; aperture subovate, outer lip sinuated, reflected, bilobed. Operculum unknown.

Synonym. *Chelitropis.* Forbes.

Species 43. (Mus. Brit.)

SINUSIGERA CANCELLATA. *Sinu. testâ subglobosâ, obliquè cancellatâ; spirâ subconicâ, anfractibus quinis, rotundis; aperturâ subovatâ, labro sinuato, bilobato, validè reflexo; lobis productis, superiori ad terminum expansâ, divisâ.*

THE CANCELLATED SINUSIGERA. Shell subglobose, obliquely cancellated, spire rather conical; whorls five, rounded; aperture subovate, outer lip sinuated, bilobed, strongly reflected; lobes produced, upper expanded, divided at the end.

D'ORBIGNY. Adams. Genera, Plate CXXXVII. f. 4.

Hab. —— ?

Species 44. (Mus. Sowerby?)

SINUSIGERA MICROSCOPICA? *Sinu. testâ subglobosâ, spiraliter striatâ; spirâ brevi, subconicâ; anfractibus quinis, rotundis, ultimo magno; aperturâ subrotundâ, columellâ tenui, acutâ, rectiùsculâ, labro bilobato, lobis moderatè productis.*

THE MICROSCOPIC SINUSIGERA. Shell subglobose, spirally striated, spire short, subconical; whorls five, rounded, last large; aperture rather rounded, columella thin, sharp, rather straight, outer lip two-lobed; lobes moderately produced.

GRAY. (Struthiolaria). Voyage of the Blossom.

Chelitropis Hanleyi. Forbes.

Hab. Atlantic Ocean.

The principal difference between this and the previous species is that the former is striated spirally only, and the latter is cancellated.

Genus BALANTIUM (*continued*).

Species 45. (Fig. *a*, *b*, Mus. —— ?)*

BALANTIUM INFLATUM. *Bal. testâ utrinquè convexâ, trigonâ, versus apicem decurvâ, ferè uncinatâ; facie dorsali radiatim leviter sulcatâ; aperturâ latâ, labro leviter lobato.*

THE INFLATED BALANTIUM. Shell convex on each side, trigonal, vent downwards towards the apex, almost hooked; dorsal surface radiately slightly grooved; aperture broad, outer lip slightly lobed.

EYDOUN et SOULEYET. Voy. de la Bonite.

Hab. —— ?

Species 46. (Mus. —— ?)*

BALANTIUM AUSTRALE. *Bal. testâ angustâ, versus terminum attenuatâ, ad latera convexiùsculâ; aperturâ subtrigonâ, labro acuminato; apice in spiculum mamillatum producto.*

THE AUSTRALIAN BALANTIUM. Shell narrow, attenuated towards the end; rather convex at the sides; aperture subtrigonal, outer lip acuminated; apex produced into a mamillated spike.

D'ORBIGNY. Voy. Amér. Mérid.

Hab. —— ?

Species 47. (Mus. —— ?)*

BALANTIUM CHAPTALII. *Bal. testâ trigonâ, compressâ, transversè sulcatâ, ad latera submarginatâ; angulis lateralibus acutis; apice attenuato, acuminato.*

CHAPTAL'S BALANTIUM. Shell trigonal, compressed, transversely grooved, slightly bordered at the sides; apex attenuated, acuminated.

EYDOUN et SOULEYET. Voy. de la Bonite.

Hab. —— ?

* The above three specimens of Balantium are not known in the principal collections, but are copied in order to make the interesting little genus as nearly complete as possible.

PTEROPODA.

	Plate.	Species.
aciculata, *D'Orbigny.* Cre.	V.	29
affinis, *D'Orbigny.* Hy.	I.	3
arctica, *Fabricius.* Spi.	VI.	40
Australe, *D'Orbigny.* Bal.	VI.	46
Australis, *D'Orbigny.* Cleo.	IV.	22
Australis, *Souleyet.* Spi.	VI.	39
Balantium, Rang. *Bal.*	IV.	26
cancellata, *D'Orbigny.* Sin.	VI.	43
Chaptalii, *Eydoux.* Bal.	VI.	47
clathratus, *Souleyet.* Spi.	VI.	41
columnella, *Rang.* Trip.	V.	27
corniformis, *D'Orbigny.* Cre.	V.	31
Cumingii, *Deshayes.* Hy.	I.	5
cuspidata, *Quoy.* Cleo.	IV.	23
depressa, *D'Orbigny.* Dia.	III.	19
flava, *D'Orbigny.* Hy.	I.	2
Flemingii, *Forbes.* Spi.	V.	34
Forskalii, D'Orbigny. *Hy.*	I.	4
gibbosa, *Rang.* Hy.	I.	7
globulosa, *Rang.* Hy.	I.	6
inflata, *Rang.* Atl.	VI.	42
inflatum, *Eydoux.* Bal.	VI.	45
inflexa, *Lesueur.* Dia.	III.	17
intermedia, *Sowerby.* Hy.	II.	10
Jeffreysii, *Forbes* and *Hanley.* Spi.	V.	37
Keraudreni, *Rang.* Atl.	III.	21
labiata, *D'Orbigny.* Dia.	III.	18
lævigata, *D'Orbigny.* Hy.	II.	13
limbata, *D'Orbigny.* Hy.	II.	11
lobata, *Sowerby.* Cleo.	IV.	24
longirostris, *Lesueur.* Hy.	II.	12
Macandrei, *Forbes.* Spi.	V.	35
microscopica, *Gray.* Lin.	VI.	44
minuta, *Sowerby.* Hy.	II.	9
mucronata, *Lesueur.* Dia.	III.	16
nebulosa, Deshayes. *Hy.*	I.	5
obtusa, Rang.	V.	27
obtusa, *Sowerby.* Hy.	II.	8
papilionacea, Vincent. *Hy.*	I.	4
Peronii, *Lesueur.* Atl.	III.	20
pyramidata, *Quoy.* Cleo.	IV.	25
quadridentata, *Lesueur.* Dia.	II.	14
Rangii, Deshayes. *Hy.*	I.	4
recurvum, *Children.* Bal.	IV.	26
rotunda, *D'Orbigny.* Spi.	V.	36
rotunda, *Sowerby.* Cre.	V.	28
spinifera, *Rang.* Cre.	V.	33
striata, *Rang.* Cre.	V.	30
subula, Quoy. *Cre.*	V.	33
tridentata, *D'Orbigny.* Hy.	I.	4
trispinosa, *Lesueur.* Dia.	III.	15
uncinnata, *D'Orbigny.* Hy.	I.	1
ventricosa, *Souleyet.* Spi.	V.	38
virgula, *Rang.* Cre.	V.	32

MONOGRAPH

OF THE GENUS

ANCYLUS.

All Thy works before Thee stood,
And Thine eye beheld them good,
While they sang with one accord,
Holy, holy, holy Lord.—*James Montgomery.*

7a

2a

2b

7b

3a 3b

3c 3d

7c

4a

4b

a b

5

G.B. Sowerby del et Lith.

Vincent Brooks Day & Son Imp.

ANCYLUS.

PLATE I.

Genus ANCYLUS. *Geoffroy.*

MOLLUSCUM AQUATICUM. *Testa patelliformis, plerùmque sinistralis, nonsymmetrica, epidermide induta, apice sublaterali, subspirali; operculum nullum.*

MOLLUSC, FRESHWATER. Shell patelliform, generally sinistral, non-symmetrical, covered with an epidermis, apex sublateral, subspiral; operculum, none.

Like the Limnæadæ, the Ancyli are found in ponds and rivers of fresh water, and like them are capable of living at times uncovered by water. They are found in all climates. We have two well-known British species. Others exist eastward in India and westward in the United States; southwards, we have Brazilian and Peruvian species, and the first and finest species on our list, *A. Cumingianus*, dates from Van Diemen's Land.

Species 1. (Fig. *a*, *b*, *c*, Mus. Sowb.)

ANCYLUS CUMINGIANUS. *Anc. testâ profundè calyciformi, subovatâ, posticè angustâ, anticè amplâ, epidermide olivaceo indutâ; dorso elevato, rotundo, radiatim costato, apice posticè submarginali, lateraliter valdè producto, unispirali.*

CUMING'S ANCYLUS. Shell deeply cup-shaped, subovate, narrow behind, full in front, covered with an olive epidermis; back elevated, rounded, radiately ribbed, apex posteriorly submarginal, laterally much produced, unispiral.

BOURGNIGNAT. Proc. Zool. Soc. 1853. Pl. XX. f. 1–9.

Hab. Van Diemen's Land.

Species 2. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS TEXTILIS. *Anc. testâ depressâ, epidermide stramineâ, ad marginem brunnescens indutâ, radiatim costatâ, concentricè tenuissimè striatâ, intùs castaneâ; dorso depresso, apice obtuso, sublaterali.*

THE TEXTILE ANCYLUS. Shell depressed, covered with a straw-coloured epidermis, becoming brown at the margin, radiately ribbed, concentrically very finely striated; back depressed, apex obtuse, sublateral.

GUPPY. Proc. Zool Soc. 1870. Pl. XVII. f. 9–11.

Hab. Trinadad.

Species 3. (Fig. *a*, *b*, *c*. *d*, Mus. Brit.)

ANCYLUS FLUVIATILIS. *Anc. testâ ovato-subrotundâ, tenui, pallidè stramineâ, vel cæruleâ, subconicâ, dorso declivi; apice posticè submarginali, subcentrali.*

THE RIVER ANCYLUS. Shell ovate, rather round, thin, pale straw or blueish, subconical, back sloped; apex posteriorly submarginal, subcentral.

GMELIN. Linn. Syst. Nat.

Patella rostrata. D'Argenville.

Patella cornea. Poiret.

Patella meridionalis. Beck.

Ancylus simplex. Bourguignat.

Hab. Great Britain, and Europe generally.

Species 4. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS LACUSTRIS. *Anc. testâ subovatâ, elongatâ, tenui, lateraliter subcompressâ, anticè subattenuatâ, epidermide fusco indutâ; dorso tenuissimè radiatim striatâ; apice postero-laterali.*

THE LAKE ANCYLUS. Shell subovate, elongated, thin, laterally rather compressed, anteriorly subattenuated, covered with a brown epidermis; back very finely radiately striated; apex postero-lateral.

LINNÆUS (Patella). Syst. Nat.

Patella oblonga. Dillwyn.

Hab. Great Britain, and Europe generally.

Species 5. (Mus. Brit.)

ANCYLUS CAFFRA. *Anc. testâ subolivaceo-corneâ, regulariter ovatâ, profundè calyciformi, lævigatâ; dorso elevato, arcuato; apice postero-sublaterali, acuminato.*

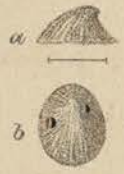
THE CAFFER ANCYLUS. Shell subolive-horny, regularly oval, deeply cup-shaped, smooth; back raised, arched; apex posteriorly sublateral, acuminated.

KRAUSS. Südafricanischen Mollusken, T. IV. Pl. XIII.

Hab. South Africa.

This has a much more pointed apex than Ancylus Cumingianus, which is the only other species with so rounded a back.

7.



6.

8.

9a.

10.

11.

9b.

12.

14.

13.

G B Sowerby del et Lith

Vincent Brooks Day & Son Imp

ANCYLUS.

PLATE II.

Species 6. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS JANII. *Anc. testâ ovatâ, subconicâ, albâ, tenuiter radiatim liratâ, anticè angustiori; apice acuminato, posticè submarginali, lateraliter subcentrali.*

JANUS'S ANCYLUS. Shell ovate, somewhat conical, white, finely radiately ridged; anteriorly narrower, acuminated, posteriorly submarginal, laterally subcentral.

BOURGUIGNAT. Proc. Zool. Soc. 1853, p. 83.

Hab. Italy.

Species 7. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS DIAPHANUS. *Anc. testâ subdepressâ, ovatâ, pallidè fulvâ, semipellucidâ, lævigatâ; apice obtuso, lateraliter submarginali, posticè paulo-postmediano.*

THE TRANSPARENT ANCYLUS. Shell rather depressed, ovate, pale fulvous, semi-pellucid, smooth; apex obtuse, laterally submarginal, posteriorly a little post-median.

HALDEMAN. New Freshwater Shells.

Hab. Ohio.

Species 8. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS BACONI. *Anc. testâ parvâ, ovato-oblongâ, depressâ, translucidâ, nitenti, pallidè succineâ; apice obtuso, lateraliter submarginali, posticè longè postmediano.*

BACON'S ANCYLUS. Shell small, ovate-oblong, depressed, translucid, shining, pale amber; apex obtuse, laterally submarginal, posteriorly far behind the centre.

BOURGUIGNAT. Proc. Zool. Soc. 1853, p. 89.

Hab. Bengal.

Species 9. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS VITRACEUS. *Anc. testâ latâ, depressâ, rotundâ, diaphanâ, pallidè fulvâ, prope marginem corneâ, fasciis nigrescentibus variegatis; apice obtuso, versus marginem postero-lateralem declivi.*

THE GLASSY ANCYLUS. Shell broad, depressed, rounded, transparent, pale fulvous, horny near the margin, variegated with blackish bands; apex obtuse, sloped towards the postero-lateral margin.

MORELET. Proc. Zool. Soc. 1853, p. 88.

Hab. Portugal.

Species 10. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS SPINA-ROSÆ. *Anc. testâ dextrali, pallidè fulvâ, lævigatâ, profundè calyculatâ, ovatâ, dorso arcuato, elevato, apice uncinato, posticè et lateraliter submarginali.*

THE ROSE-THORN ANCYLUS. Shell dextral, pale fulvous, smooth, deeply cup-shaped, ovate, back arched, raised; apex hooked, posteriorly and laterally submarginal.

DRAPARNAUD. Hist. Moll. Pl. XIII. f. 10–12.

Ancylus deperditus. Zeigler.

Ancylus gibbosus. Bourguignat.

Hab. Germany.

Species 11. (Mus. Brit.)

ANCYLUS DROUETIANUS. *Anc. testâ conicâ, subviridi, lævigatâ, radiatim læviter sulcatâ, ovatâ, posticè angustiori, anticè amplâ, margine leviter undulatâ, apice acuminato, posticè submarginali, lateraliter subcentrali.*

DROUET'S ANCYLUS. Shell conical, greenish, smooth, radiately slightly grooved, ovate, narrow posteriorly, full anteriorly, margin slightly undulating; apex acuminated, posteriorly submarginal, laterally subcentral.

BOURGUIGNAT. Proc. Zool. Soc. 1853, Pl. XX. f. 18–25.

Hab. Teneriffe.

Species 12. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS DESHAYESIANUS. *Anc. testâ conicâ, breviter ovatâ, tenui, pallidè corneâ, opacâ, lævigatâ, intùs*

albâ, anticè expansâ; apice valdè retrorso, acuminato, elevato, lateraliter subcentrali; dorso declivi.

DESHAYES'S ANCYLUS. Shell conical, shortly ovate, thin pale horn, opaque, smooth, white within, anteriorly expanded; apex much thrown backwards, acuminated, elevated, laterally subcentral; back sloped.

BOURGUIGNAT. Cat. esp. Journ. Conch.

Hab. Europe.

Species 13. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS RUPICOLA. *Anc. testâ ovatâ, dextrali, profundè calyciformi, corneâ, lævigâtâ, pellucidâ, dorso arcuato, apice subacuminato, ultra marginem postico-lateralem producto.*

THE ROCK-INHABITING ANCYLUS. Shell ovate, dextral, deeply cup-shaped, horny, smooth, pellucid, back arched; apex slightly acuminated, produced beyond the postero-lateral margin.

SHUTTLEWORTH. ——?

Hab. Teneriffe (on moist rocks).

Species 14. (Fig. *a*, *b*, Mus. Brit.)

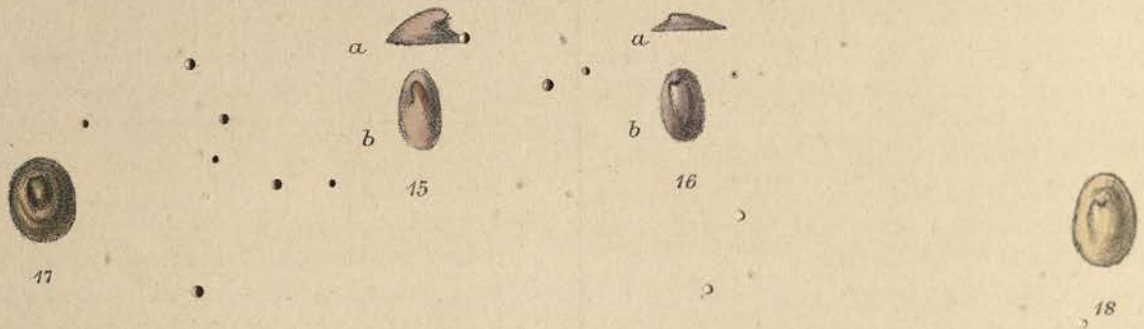
ANCYLUS SOULCYANUS. *Anc. testâ depressâ, patulâ, coffeâ, costellis crebris radiatis et striis minutissimis concentricis sculptâ, posticè angustâ, anticè expansâ, margine dextrali rectiusculo; dorso obliquè declivi, apice depresso, posticè extra-marginali.*

SOULCY'S ANCYLUS. Shell depressed, patulous, coffee-coloured; sculptured with radiating very minute concentric striæ, posteriorly narrow, anteriorly expanded, dextral margin rather straight; back obliquely sloped; apex depressed, posteriorly extra-marginal.

BOURGUIGNAT. Proc. Zool. Soc. 1853, Pl. XX. f. 26–33.

Hab. Venezuela.

A very oblique, sculptured species, with the small apex close to the margin and appearing beyond it.



G.B. Sowerby. del. et lith.

Vincent Brooks Day & Son, Imp.

ANCYLUS.

PLATE III.

Species 15. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS STRICTUS. *Anc. testâ obscurè fuscâ, conicâ, angustâ, elongatâ, lævigatâ, lateribus compressis, intùs cæruleo-roseâ, dorso elevatâ, apice arcuato, longè post-mediano.*

THE NARROWED ANCYLUS. Shell dull brown, conical, narrow, elongated, smooth, with compressed sides, inside blueish pink, back elevated, apex arched, placed far backwards.

MOORE —— ? MS. Mus. Brit.

Hab. —— ?

Species 16. (Fig. *a*, *b*, Mus. Brit.)

ANCYLUS BARILENSIS. *Anc. testâ depressâ, oblongâ, angustâ, castaneâ, lævigatâ, intùs vinosâ; dorso declivi; apice acuminato, posticè et lateraliter submarginali.*

BARILIS ANCYLUS. Shell depressed, oblong, narrow, chestnut, smooth, vinous within; back sloped; apex acuminated, posteriorly and laterally submarginal.

MORICAND. Coq. Ter. et Fluv. Bahia.

Hab. Brazil.

Species 17. (Mus. Brit.)

ANCYLUS KOOTANENSIS. *Anc. testâ brevi, latâ, subrotundâ, depressâ, corneo-rubescenti; apice obtuso, subcentrali, frequenter nigrescenti.*

THE KOOTAN ANCYLUS. Shell short, broad, rather round, depressed, reddish horn; apex obtuse, subcentral, often black.

BAIRD. Proc. Zool. Soc. 1863, p. 69.

Hab. River Oregon.

Species 18. (Mus. Brit.)

ANCYLUS PARALLELUS. *Anc. testâ compressâ, oblongâ, subrectilaterali, translucidâ, pallidissimè corneâ; dorso declivi, apice posticè et lateraliter subcentrali.*

THE PARALLEL ANCYLUS. Shell compressed, oblong, rather straight-sided, transparent, very pale horn; back sloped, apex posteriorly and laterally subcentral.

HALDEMAN. Mon. Freshwater. Sh. Proc. Zool. Soc. 1853, 84.

Hab. New Orleans.

Species 19. (Mus. Brit.)

ANCYLUS CONCENTRICUS. *Anc. testâ olivaceo-corneâ, subconicâ, sulcis inconspicuis undulatis radiatâ, concentricè lineatâ, oblongâ, posticè angustatâ, anticè subexpanso; dorso versus apicem elevato; apice acuminato, uncinato, ad marginem postico-lateralem approximato.*

THE CONCENTRIC ANCYLUS. Shell olive-horn, rather conical, rayed with indistinct undulating grooves, with concentric lines, oblong, posteriorly narrowed, anteriorly subexpanded; back raised towards apex; apex acuminated, hooked, approaching the postero-lateral margin.

D'ORBIGNY. Voy. Amér. Mérid. t. v. p. 354.

Hab. Montevideo.

Species 20. (Mus. Brit.)

ANCYLUS IRRORATUS. *Anc. testâ elongatâ, angustâ, compressâ, punctulis nigrescentibus aspersâ, latere dextrali rectiùsculo; apice sublaterali, a margine postico subremoto.*

THE SPRINKLED ANCYLUS. Shell elongated, narrow, compressed, sprinkled with little blackish spots, left side rather straight; apex rather lateral, rather remote from the posterior margin.

GUILDING. Proc. Zool. Soc. 1853.

Hab. Antilles.

Species 21. (Mus. Brit.)

ANCYLUS CHITTYI. *Anc. testâ griseo-fuscâ, obliquâ, profundè calyculatâ, subovatâ, anticè subacuminatâ; dorso obliquè arcuato; apice gibboso, extra marginem postico-lateralem producto.*

CHITTY'S ANCYLUS. Shell grey-brown, oblique, deeply cup-shaped, subovate, anteriorly subacuminated; back obliquely arched, apex gibbous, produced beyond the postero-lateral margin.

ADAMS. (C. B.) —— ?

Hab. Jamaica.

Species 22. (Mus. Brit.)

ANCYLUS SIBIRICUS. *Anc. testâ dextrali, obliquè conicâ, fulvâ, ovatâ, intùs albâ; dorso alto, obliquo, apice extra-marginali, obtusiùsculo.*

THE SIBIR ANCYLUS. Shell dextral, obliquely conical, fulvous, ovate, white within; back high, oblique, apex extra-marginal, rather obtuse.

GERSFELDT. Moll. Sibur. et Amur.

Hab. Sibir.

Species 23. (Mus. Brit.)

ANCYLUS MORICANDI. *Anc. testâ angustâ, compressâ, elongatâ, ferrugineâ, opacâ, intùs subroseâ; dorso declivi, apice posticè subcentrali, lateraliter submarginali.*

MORICAND'S ANCYLUS. Shell narrow, compressed, elongated, ferruginous, opaque, pinkish inside; back sloped, apex posteriorly subcentral, laterally submarginal.

D'ORBIGNY. Voy. Amér. Mérid. T. V. p. 355.

Ancylus Bahiensis. Moricand.

Ancylus Navicula. Spix.

Hab. Lake Baril, Bahia.

Species 24. (Mus. Brit.)

ANCYLUS CULICOIDES. *Anc. testâ depressâ, fulvâ, radiatim tenuiter striatâ, elongatâ, posticè subcontractâ, dorso lentè declivi, apice subacuminato, subcentrali.*

THE HOOD-SHAPED ANCYLUS. Shell depressed, fulvous, radiately finely striated, elongated, posteriorly rather narrowed, back gently sloped, apex acuminated, subcentral.

D'ORBIGNY. Amér. Mérid. III. p. 335.

Hab. South America.

Species 25. (Mus. Brit.)

ANCYLUS FILOSUS. *Anc. testâ ovatâ, conicâ, tenuissimè striatâ, semi-pellucidâ, roseo-fulvâ, apice posticè et lateraliter subcentrali.*

THE THREADED ANCYLUS. Shell ovate, conical, very finely striated, semi-pellucid, rose-fulvous, apex posteriorly and laterally subcentral.

CONRAD. New Freshwater Shells. Haldeman's monograph.

Hab. Alabama.

Species 26. (Mus. Brit.)

ANCYLUS RADIATUS. *Anc. testâ parvâ, albâ, translucidâ, subconicâ, striis tenuissimis radiatâ, ovatâ, antiècè subangustatâ, apice versus marginem postlateralem producto.*

THE RAYED ANCYLUS. Shell small, white, translucid, subconical, rayed with very fine striæ, ovate, anteriorly rather narrowed, produced towards the post-lateral margin.

GUILDING. Zool. Journ. Vol. III. p. 536.

Hab. St. Vincent.

Species 27. (Mus. Brit.)

ANCYLUS HAVANENSIS. *Anc. testâ depressâ, longiùsculâ, posticè subangustatâ, corneâ, intùs subroseâ; apice obtuso, postice subcentrali, lateraliter submarginali.*

THE HAVANA ANCYLUS. Shell depressed, rather long, posteriorly rather narrow, horny, pinkish within; apex obtuse, posteriorly subcentral, laterally submarginal.

PFEIFFER. Bourg. Proc. Zool. Soc. 1853.

Hab. Cuba.

Species 28. (Mus. Brit.)

ANCYLUS BEANII. *Anc. testâ parvâ, corneâ, lævigatâ, nitenti, depressâ, ovatâ, latere dextrali rectiùsculâ; dorso declivi, apice obtuso versus marginem postico-lateralem elevato.*

BEAN'S ANCYLUS. Shell small, horny, smooth, shining, depressed, ovate, right side rather straight; back sloped, apex obtuse, raised towards postero-lateral margin.

BOURGUIGNAT. Proc. Zool. Soc. 1853, p. 81.

Hab. Guadaloupe.

Species 29. (Mus. Brit.)

ANCYLUS OBLIQUUS. *Anc. testâ parvâ fusco-corneâ, obliquâ, profundâ, subovatâ, lævigatâ, postice paulò attenuatâ; apice producto, ad marginem postico-lateralem extenso.*

THE OBLIQUE ANCYLUS. Shell small, brownish horn, oblique, deep, subovate, smooth, posteriorly a little attenuated; apex produced, extended to the posterior-lateral margin.

BRODERIP. Proc. Zool. Soc. 1832, p. 202.

Hab. Chili.

Species 30. (Mus. Brit.)

ANCYLUS FUSCUS. *Anc. testâ aureo-fuscâ, lævigatâ, oblongâ, intùs ferè albâ, lateribus subcompressis, rectiùsculis; dorso subelevato, apice obtuso, lateraliter et posticè subcentrali.*

THE BROWN ANCYLUS. Shell golden brown, smooth, oblong, almost white within; sides rather compressed, rather straight; back rather raised, apex obtuse, laterally and posteriorly subcentral.

ADAMS (C. B.). Boston Journ. Nat. Hist. Vol. III., p. 329.

Hab. United States.

MONOGRAPH

OF THE GENUS

ALYCÆUS.

Thou art in all things one, in each thing many;
For Thou art infinite in one and all.—*Trench.*

1c.

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1b.

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

ALYCÆUS.

PLATE I.

Genus ALYCÆUS. *Gray.*

Testa terrestris, heliciformis; spira conica, sutura profunda; ultimus anfractus distortus, medio dorsi tumidus, callo retroverso suturam tegens, post marginem aperturæ contractus. Operculum rotundum corneum inconspicuè multispirale.

Shell terrestrial, heliciform; spire conical, suture deep; last whorl distorted, tumid at the middle of the back, covering the suture with a retroversal callus, contracted behind the margin of the aperture. Operculum rounded, horny, inconspicuously multispiral.

All the Alycæi browse in eastern pastures. A large numerical proportion of the species find their homes in India proper; but Borneo, Japan, and other eastern lands and islands produce their contingents. The typical species, *Alycæus gibbus*, the first type, belongs to Cochin-China.

The peculiarities which distinguish the Alycæi from other Cyclostomidæ are very interesting. At first you have a more or less regular spire of several volutions; then, at the side of the last whorl, farthest removed from the aperture, the spiral tube begins to swell, increasing in volume to about the middle of the back, when it suddenly contracts, throwing back a narrow callus at the suture. Between this contraction and the back edge of the aperture, the tube is always narrow, but with various callosities, mouth rings, or other inequalities till the aperture itself is reached.

Species 1. (Fig. *a*, *b*, Mus. Brit.)

ALYCÆUS CRENATUS. *Aly. testâ conicâ, subviridi, omninò minutè striatâ, ultimo anfractu ad dorsum moderatè tumido, tum valdè, breviter, contracto, deindè callo magno, obliquo cincto, ante callum subexpanso; callo retroverso rugoso, albo, inæquali, elongato; aperturæ margine albo, latè laqueato; operculo lato.*

THE CRENATED ALYCÆUS. Shell conical, greenish, all over minutely striated, last whorl moderately tumid at the back, then strongly, briefly, contracted, afterwards girt with a large, oblique callus, rather expanded in front of the callus; retroversal callus rough, white, unequal, long; aperture white at the margin, broadly fluted; operculum broad.

GODWIN AUSTIN. Journ. Asi. Soc. Beng. 1871.

Hab. Burrail Range, N. Cachar.

The white, oblique 'collar ruff' and the broadly fluted margin of the mouth distinguish this species, which is of small size.

Species 2. (Mus. Brit.)

ALYCÆUS DIAGONUS. *Aly. testâ minutâ, pallidè castaneâ, lævi, obliquè spirali; aperturâ crassâ, margine duplicato, subcrenulato, umbilico mediocri, tumulo dorsali haud magno.*

THE DIAGONAL ALYCÆUS. Shell minute, pale chestnut, smooth, obliquely spiral; aperture thick, with a double rather crenulated margin; umbilicus middle-sized; dorsal swelling not large.

GODWIN-AUSTIN. Journ. Asi. Soc. Bengal. 1871.

Hab. Diyung Valley, N. Cachar.

Species 3. (Mus. Brit.)

ALYCÆUS VESTITUS. *Aly. testâ conicâ, pallidè castaneâ, anfractibus ad suturam crenulatis; ultimo ad dorsum moderatè tumescenti; aperturâ ad anfractum penultimum emarginatâ; margine albo, crasso, simplici.*

THE INVESTED ALYCÆUS. Shell conical, pale chestnut; whorls crenulated at the suture, last moderately swelling at the back; aperture emarginated at the penultimate whorl; margin white, thick, extùs declivi.

BLANFORD. Journ. Asi. Soc. Bengal, 1871.

Hab. Aracan Hills.

Species 4. (Mus. Brit.)

ALYCÆUS GIBBUS. *Aly. testâ conicâ, fulvâ; spirâ breviùsculâ, apici rubro; ultimo anfractu lateraliter expanso, ad dorsum depresso-gibboso, prope aperturam angustissimo; callo suturali inconspicuo; aperturâ rotundâ, margine tenuiter duplicato; umbilico brevi.*

THE HUNCHBACK ALYCÆUS. Shell conical, fulvous; spire rather short, with red apex; last whorl laterally expanded, depressed-gibbous at the back, very narrow near the aperture; sutural callus inconspicuous; aperture rounded, margin thinly doubled; umbilicus short.

FERRUSSAC.

Hab. Cochin-China.

Species 5. (Mus. —— ? Copied.)

ALYCÆUS MARGARITUS. *Aly. testâ subglobosâ, albidâ; anfractibus tribus, rotundis, ultimo post aperturam moderatè (?) contracto, aperturæ margine duplicato; margine interno tenui, producto; margine externo planato, expanso; umbilico parvo.*

THE PEARL ALYCÆUS. Shell subglobose, whitish; whorls three, rounded, last moderately (?) contracted behind the aperture; margin of the aperture double; inner margin thin, produced; outer margin flattened, expanded; umbilicus small.

THEOBALD MSS. Hanley, Conch. Ind. Pl. 95, f. 10.

Hab. Shan provinces.

The second figure in the Indian Conchology (Pl. XCVII., f. 7), given as representing a variety of this species, has every appearance of belonging to another. I have therefore named it *Al. microstoma* in Plate IV.

Species 6. (Mus. ——?)

ALYCÆUS PYRAMIDALIS. *Aly. testâ majùsculâ, pyramidatâ, rubro-fuscâ, lævi; ultimo anfractu lateraliter expanso, ad dorsum gibboso, subitò contracto, tùm breviter continuo, callo suturali inconspicuo elongato; margine aperturæ lato, planato; umbilico angustiùsculo.*

THE PYRAMIDAL ALYCÆUS. Shell rather large, pyramidal, red-brown, smooth; last whorl laterally expanded, gibbous at the back, suddenly contracted, then shortly continued, sutural callus inconspicuous, long; margin of the aperture broad, flattened, rather narrow.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. 225.

Hab. Therabuin Hill, Tennasserim, Burmah.

Much resembling *Alycæus gibbus*, but more pyramidal.

Species 7. (Mus. Brit.)

ALYCÆUS PUSILLUS. *Aly. testâ parvâ, albâ, depressâ, liratâ; ultimo anfractu ad latus latè producto, ad dorsum inflato et profundè rugato; ad tumoris terminum leviter coarctato, tum post aperturam subexpanso; callo suturali parvo, brevi, distincto; umbilico lato, margine aperturæ crasso, subrotundo.*

THE DWARF ALYCÆUS. Shell small, white, depressed, ridged; last whorl broadly produced at the side, inflated and deeply-wrinkled at the back, slightly contracted at the end of the tumour, then a little expanded behind the aperture; sutural callus small, short, distinct; umbilicus broad, margin of the aperture thick, rather round.

GODWIN-AUSTIN. Journ. Asi. Soc. Beng.

Hab. Jawai to Asalu.

Species 8. (Mus. Godwin-Austin.)

ALYCÆUS KHASIACUS. *Aly. testâ depressâ, fusco-rubescenti, profundè sulcatâ, anfractibus quaternis, depressis, apicali rubro, ultimo ad dorsum validè inflato, profundè sulcato, ad terminum tumoris subitò profundè contracto, tum usque ad marginem aperturæ expanso; callo suturali brevi, tenui, conspicuo, umbilico lato, margine aperturæ crasso, subrotundo.*

THE KHASIAN ALYCÆUS. Shell depressed, reddish brown, deeply grooved, whorls four, depressed, apical red, last much inflated at the back, suddenly and deeply contracted at the end of the tumour, then expanded to the margin of the aperture; sutural callus short, thin, conspicuous; umbilicus broad, margin of the aperture thick, rounded.

GODWIN-AUSTIN. Journ. Asi. Soc. Beng. 1871, Vol. XL.

Hab. Khasia and Jaintia Hills.

Species 9. (Mus. Godwin-Austin.)

ALYCÆUS CONICUS. *Aly. testâ solidâ, subviridi, obtusè conicâ, ad suturam crenulatâ; anfractibus quinis, apicalibus rubescentibus, ultimo lato, tumore dorsali densè lirato-rugato, ad terminum tumoris breviter angusto, lævi; margine aperturæ crassissimo, retrorsùm declivi, callo suturali elongato, angusto, rugoso; umbilico maximo.*

THE CONICAL ALYCÆUS. Shell solid, greenish, obtusely conical, crenulated at the suture; whorls five, apical, reddish, last broad, dorsal tumor closely wrinkled in ridges, shortly narrow, smooth at the end of the tumor; margin of the aperture very thick, shelving backwards, sutural callus lengthened, narrow, rough; umbilicus, very large.

GODWIN-AUSTIN. Journ. Asi. Soc. Bengal, 1871, Vol. XL

Hab. East of Kopili River, North Cachar.

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14 a.

14 b.

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

ALYCÆUS.

PLATE II.

Species 10.

ALYCÆUS ANDAMANIÆ. *Aly. testâ subdepressâ, latâ concentricè distanter liratâ, inter liras spiraliter striatâ, anfractibus trinis, ultimo ad dorsum moderatè inflato, post marginem aperturæ moderatè contracto, umbilico latissimo; aperturâ ad anfractum subemarginatâ, margine albo, tenuiter duplicato.*

THE ANDAMAN ALYCÆUS. Shell subdepressed, broad, concentrically distantly ridged, spirally striated between the ridges; whorls three, last very broad, moderately inflated at the back, moderately contracted behind the margin of the aperture; umbilicus very broad, aperture rather emarginated at the last whorl; margin white, thinly duplicate.

BENSON. Ann. Nat. Hist. 1861, Ser. 3, Vol. VII.

Hab. Port Blair, Andaman Islands.

Species 11. (Mus. Brit.)

ALYCÆUS POLYGONUS. *Aly. testâ conicâ, fuscâ, lævigatâ; anfractibus quaternis, ultimo ad medium dorsi breviter inflato, tum breviter contracto, et margine albo, lato exfoliato, deinde antè aperturæ marginem breviter augusto; callo suturali elevato, longiùsculo; umbilico parvo, margine aperturæ albo, polygono.*

THE POLYGONAL ALYCÆUS. Shell conical, brown, smooth; whorls four, last shortly inflated at the middle of the back, then briefly contracted, sutural callus raised, rather long; umbilicus small, margin of the aperture white, polygonal.

BLANFORD. Journ. Asi. Soc. Beng. 1862.

Hab. ——?

Species 12. (Mus. Hanley.)

ALYCÆUS CUCULLATUS. *Aly. testâ depressâ, albidâ, concentricè regulariter sulcatâ; anfractibus trinis, ultimo latissimo, ad dorsum breviter tumido, semitruncato, antè tumorem brevissimè contracto; margine aperturæ externo latè expanso, albo interno, longè producto, plicato et laqueato; umbilico latissimo, callo suturali cincinno, breviùsculo.*

THE HOODED ALYCÆUS. Shell depressed, white, concentrically regularly grooved; whorls three, last very broad, shortly turnid at the back, half-truncated, very shortly contracted in front of the tumor; external margin of the aperture broadly expanded, white, internal lengthily plaited and fluted; umbilicus very broad; sutural callus neat, rather short.

THEOBALD. Journ. Asi. Soc. Vol. III. p. 51.

Hab. Shan States.

Species 13. (Mus. Brit.)

ALYCÆUS URNULA. *Aly. testâ albâ, altâ, lævi; anfractibus quaternis prominentibus, supra medium subangulatis, ultimo alto, post aperturam breviter angustissimo; tumori dorsali magno, in marginem contractum concinnum desinenti; callo suturali distincto, breviùsculo; umbilico parvo, margine aperturæ angusto, rotundo.*

THE URN ALYCÆUS. Shell white, high, smooth; whorls four, prominent, rather angular above the middle, last high, shortly very narrow behind the aperture; dorsal tumor large, ending in a contracted neat margin; sutural callus distinct, rather short, umbilicus small, margin of the aperture narrow, round.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. II.

Hab. Darjeeling, Himalaya.

Species 14. (Fig. *a*, *b*, Mus. Brit.)

ALYCÆUS PLECTOCHEILUS. *Aly. testâ minutâ, albâ, subcompressâ, tenuissimè striatâ; anfractibus quaternis angustis, ultimo ad dorsum breviter tumido, tùm coarctato, deindè callo flexuoso cincto; margine aperturæ producto, quinqueplicato; callo suturali subelongato; umbilico mediocri.*

THE PLAITED ALYCÆUS. Shell minute, white, rather compressed, very finely striated; whorls four, narrow, last with short tumulus at the back, then narrowed, afterwards girt with a flexuous

callus, margin of the aperture produced, five-plaited; sutural callus rather lengthened; umbilicus middle-sized.

BENSON. Ann. Nat. Hist. Ser. 3, Vol. III. p. 180.

Hab. Rungun Valley.

The margin of the aperture in this interesting little shell is curiously produced and plaited like a frill.

Species 15. (Mus. Brit.)

ALYCÆUS AMPHORA. *Aly. testâ altâ, albidâ, lævi, lateraliter subcompressâ; anfractibus quinis, superioribus rubescentibus, brevibus; ultimo alto, ventricoso, supernè subangulato, infrà lateraliter angustato et angulato; ad dorsum valdè inflato, tum subitò contracto, breviter angustissimo, post aperturam expanso; callo suturali angusto, elongato; umbilico parvo; aperturâ latâ, reflexâ, margine ad anfractûs juncturam semi-interrupto.*

THE VASE ALYCÆUS. Shell high, whitish, smooth, laterally subcompressed; whorls five, upper rather red; last high, ventricose, somewhat angular above, narrow and angular below, much inflated at the back, then suddenly contracted, very narrow for a short distance, expanded behind the aperture; sutural callus narrow, elongated; umbilicus small; aperture broad, reflected; margin half interrupted at the juncture of the whorl.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII.

Hab. Moulmein and Tennasserim.

Species 16. (Mus. ——?)

ALYCÆUS SUCCINEUS. *Aly. testâ subdepressâ, succineo-fuscâ; anfractibus quaternis regulariter rugatis, ultimo ad dorsum breviter gibboso, tùm angustissimo, lævi, medio partis angustæ margine albo extanti interrupto; aperturæ margine albo, polygono; callo suturali obliquo, albo, conspicuo, breviùsculo; umbilico mediocri.*

THE AMBER ALYCÆUS. Shell subdepressed, amber-brown; whorls four, regularly wrinkled, last shortly gibbous at the back, then very narrow, smooth, interrupted in the middle of the narrow part by a thick, outstanding white margin; margin of aperture white, polygonal; sutural callus oblique, white, conspicuous, rather short; umbilicus medium-sized.

BLANFORD. Journ. Asi. Soc. Bengal, 1862, Vol. XXXI.

Hab. Aracan Hills.

Species 17. (Mus. Brit.)

ALYCÆUS VULCANI. *Aly. testâ fuscâ, subdepressâ; anfractibus quaternis, regulariter rugatis; ultimo ad dorsum lateraliterque latè tumido, post medium dorsi subito contracto, tùm angusto lævi; medio partis angustæ callis duobus annularibus interrupto; callo suturali breviùsculo, margine aperturæ subhexagono.*

VULCAN'S ALYCÆUS. Shell brown, subdepressed; whorls four, regularly wrinkled; last broadly tumid at the back and laterally, suddenly contracted past the middle of the back, then narrow, smooth; interrupted in the middle of the narrow part with two annular calli; sutural callus rather short; margin of the aperture nearly hexagonal.

BLANFORD. Journ. Asi. Soc. Bengal, 1863, Vol. XXXII. p. 323.

Hab. Peak of Puppa in Ava.

Species 18. (Mus. ——?)

ALYCÆUS FEDDENIANUS. *Aly. testâ altâ, lævi, fuscâ; anfractibus quaternis, tertio inflato, subangulato, ultimo lateraliter subcompresso, alto, triangulato; versus aperturam gradatim angustato; callo suturali elongato, lævi; umbilico latiùsculo, margine aperturæ albo, postea planulato.*

THE FEDDEN ALYCÆUS. Shell high, smooth, brown; whorls four, third inflated, slightly angular; last laterally subcompressed, high, biangular; gradually narrowed towards the aperture; sutural callus elongated, smooth; umbilicus rather broad; margin of aperture white, flattened behind.

THEOBALD. Journ. Asi. Soc. Bengal, 1870.

Hab. Shan States, Upper Salwen.

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

ALYCÆUS.

PLATE III.

Species 19. (Mus. Brit.)

ALYCÆUS MOUHOTI. *Aly. testâ flavidâ, ventricosâ, lævi; anfractibus quinis, superioribus parvis, ultimo ventricoso, lateraliter et infrà ad dorsum inflato; post aperturam breviter angusto, aperturæ margine expanso, planato; umbilico brevissimo.*

MOUHOT'S ALYCÆUS. Shell yellow, ventricose, smooth; whorls five, upper small; last inflated laterally and below at the back, shortly narrowed behind the aperture; margin of the aperture expanded, flattened; umbilicus very short.

ADAMS. Proc. Zool. Soc. 1862, p. 275.

Hab. Isl. Formosa.

Species 20. (Mus. Brit.)

ALYCÆUS AVÆ. *Aly. testâ parvâ, depressâ, albâ, regulariter rugatâ; anfractibus angustis, ultimo tumori dorsali magno, subito ad terminum contracto; anfractûs parte inter tumorem et aperturæ marginem breviùsculâ, medio inflatâ; callo suturali brevi, distincto; umbilico lato.*

THE AVA ALYCÆUS. Shell small, depressed, white, regularly wrinkled; whorls narrow, last with large dorsal tumour, suddenly contracted at the end; part of the whorl between the tumour and the margin of the aperture rather short, inflated in the middle; sutural callus short, distinct; umbilicus broad.

BLANFORD. Journ. Asi. Soc. 1863.

Hab. Hills of Mandelay and Ava.

Species 21. (Mus. Brit.)

ALYCÆUS SWINHOEI. *Aly. testâ elevatâ, conicâ, albido-flavidâ, lævi, anfractibus quinis, suturâ profundâ separatis; ultimo ventricoso, lato, tumori laterali subinflato, tùm brevissimè angustato; callo dorsali minuto, distincto, aperturæ margine tenui, planato.*

SWINHOE'S ALYCÆUS. Shell raised, conical, whitish-yellow, smooth, whorls five, separated by a deep suture; last ventricose, broad, distinct, swelled by a lateral tumour, then very shortly narrowed; dorsal callus minute, distinct, margin of aperture thin, flattened.

H. ADAMS. Proc. Zool. Soc. 1866, p. 319.

Hab. Isl. Formosa.

Species 22. (Mus. Theobald.)

ALYCÆUS KURZIANUS. *Aly. testâ depressâ, fulvâ, tenuiter sulcatâ, anfractibus quinis, depressis, ultimo ad dorsum medio inflato, validè rugato, tùm breviter contracto et callo annulâri cincto, post aperturæ marginem crassitudine crescenti; aperturâ majùsculâ, albâ, infrà cuneatâ, canaliferâ; margine columellari rectiùsculo, margine externo crenulato; callo suturali minutâ; umbilico latissimo.*

KURZ'S ALYCÆUS. Shell depressed, fulvous, finely grooved, whorls five, depressed, last dorsally inflated in the middle, strongly wrinkled, then shortly contracted and girt with an annular callus, increasing in thickness behind the margin; aperture rather large, white, cuneate below, with a canal; columellar margin rather straight, outer margin crenulated; sutural callus minute; umbilicus very broad.

THEOBALD. Journ. Asi. Soc. Bengal.

Hab. Nattarina, Brome.

Species 23. (Mus. Hanley.)

ALYCÆUS RICHTOFENI. *Aly. testâ subdepressâ, albidâ, regulariter sulcatâ; spirâ acuminatâ, anfractibus angustibus, ultimo medio dorsi inflato tùm contracto, parte inter tumorem et aperturæ marginem angustâ, lævigatâ, per callum annularem in medio divisâ; margine aperturæ duplicato, parte externo latè planulato, parte interno producto, angustato, subcrenato; callo suturali tenui, angustato; umbilico magno.*

RICHTHOFEN'S ALYCÆUS. Shell subdepressed, whitish, regularly grooved; spire acuminated, whorls narrow, last inflated in the middle of the back, then contracted, the part between tumour and edge of aperture narrow, smooth, divided in the middle by an annular callus; margin of aper-

ture double, outer part broadly flattened, inner part produced, narrow, slightly crenated; sutural callus thin, narrow; umbilicus large.

BLANFORD. Journ. Asi. Soc. Bengal, 1863, Vol. XXXII. p. 324.

Hab. Moulmein.

Species 24. (Mus. Brit.)

ALYCÆUS DISTORTUS. *Aly. testâ breviter conicâ, griseo-fulvâ, lævi; anfractibus quaternis, rotundis; ultimo alto, post aperturam brevissimè angusto, ad dorsum et lateraliter latè inflato, tumore dorsali prope aperturam in marginem concinnum desinenti; umbilico parvo, margine aperturæ rotundo; callo suturali angusto, elongato.*

THE DISTORTED ALYCÆUS. Shell shortly conical, grey-fulvous, smooth; whorls four, rounded; last high, behind the aperture very shortly narrow; dorsal tumour ending near the aperture in a neat margin; umbilicus small, margin of aperture round; sutural callus narrow, long.

HAINES. MS. Brit. Mus.

Hab. ——?

Species 25. (Mus. Brit.)

ALYCÆUS NITIDUS. *Aly. testâ fuscâ, breviter conicâ, lævi, regulariter sulcatâ; anfractibus quaternis, ultimo inter marginem aperturæ et tumorem dorsalem medio inflato, tumore dorsali mediocri, profundè rugato, callo dorsali elongato, distincto; aperturæ margine duplicato, parte internâ subrotundâ, productâ, parte externâ complanatâ, infrà angulatâ; umbilico parvo.*

THE NEAT ALYCÆUS. Shell brown, shortly conical, smooth, regularly grooved; whorls four, last between the margin of the aperture and the dorsal tumour inflated in the middle, dorsal tumour medium sized, deeply wrinkled, dorsal callus elongated, distinct; margin of aperture double, inner part rather round, produced; outer part flattened, angular below; umbilicus small.

BLANFORD. Journ. Asi. Soc. Bengal, 1863.

Hab. Aracan.

Species 26. (Mus. Brit.)

ALYCÆUS BACCI. *Aly. testâ conicâ, altiùsculâ, lævi, tenui, pallidè subviridi, apice succineo; anfractu ultimo breviter ante aperturam breviter angusto, tumore dorsali magno, rotundo; callo suturali inconspicuo; margine aperturæ angusto, simplici, albo.*

THE BACCUS ALYCÆUS. Shell conical, rather high, smooth, thin, pale greenish, apex amber; last whorl shortly narrow, dorsal tumour large, round; sutural callus inconspicuous; aperture of the margin narrow, simple, white.

PFEIFFER. Mon. Pneum. —— ?

Hab. —— ?

Species 27. (Mus. Brit.)

ALYCÆUS BURTII. *Aly. testâ pallidè fulvâ, depressâ, lævi, spirâ acuminatâ; ultimo anfractu post aperturæ marginem brevissime angusto, tumori dorsali mediocri, sulcato; callo suturali conspicuo, valido, elongato; aperturæ margine angusto, laqueato; umbilico lato.*

BURT'S ALYCÆUS. Shell pale fulvous, depressed, smooth, spire acuminated; last whorl very shortly narrow behind the aperture; dorsal tumour middle-sized, grooved; sutural callus conspicuous, strong, elongated; margin of aperture narrow, fluted; umbilicus broad.

GODWIN AUSTIN —— ?

Hab. —— ?

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

ALYCÆUS.

PLATE IV.

Species 28. (Mus. Theobald.)

ALYCÆUS MICROSTOMA. *Aly. testâ fulvâ, subdepressâ, regulariter rugatâ; ultimo anfractu gradatim inflato, tùm propè aperturæ marginem brevissimè angustato, lævi; margine aperturæ contracto, crenato, propè suturum sinuato; umbilico lato.*

THE SMALL-MOUTHED ALYCÆUS. Shell brown, subdepressed, regularly wrinkled; last whorl gradually inflated, then very shortly narrowed and smooth near the margin of the aperture; margin of aperture contracted, crenated, sinuated near the suture; umbilicus broad.

SOWERBY.

Alycæus margarita. Theobald (MS.).

Hab. Shan Provinces.

This shell is so different from *Alycæus margarita*, as originally described, that the writer has found it necessary to give it a name.

Species 29. (Mus. Brit.)

ALYCÆUS NICOBARICUS. *Aly. testâ conicâ, subdepressâ, subviridè corneâ; anfractibus quaternis, rotundis, ultimo medio dorsi moderatè inflato, ad terminum tumore dorsali concinnè marginato, deindè lævi, angusto; umbilico mediocri; margine aperturæ duplicato, parte internâ crassâ subproductâ; callo suturali brevissimo, conspicuo.*

THE NICOBAR ALYCÆUS. Shell conical, subdepressed, greenish horny; whorls four, round, last moderately inflated in the middle of the whorl, neatly edged at the end of the dorsal tumour, then smooth, narrow; umbilicus medium-sized; margin of aperture double, inner part thick, slightly produced; sutural callus very short, conspicuous.

MORCH —— ? MS. Brit. Mus.

Hab. Nicobar Islands.

Species 30. (Mus. Brit.)

ALYCÆUS OTIPHORUS. *Aly. testâ conicâ, altiùsculâ, lævi, griseo-albidâ; anfractibus quinis, prominentibus; ultimo post aperturam constricto, tùm conspicuè inflato et ad marginem tumore contracto; tumore dorsali brevi; callo suturali brevissimo; umbilico parvo; margine aperturæ suprà infràque subangulato.*

THE EAR-HOLE ALYCÆUS. Shell conical, rather high, smooth, whitish-grey; whorls five, prominent; last constricted behind the aperture, then conspicuously inflated and contracted at the edge of the tumour; dorsal tumour short; sutural callus very short; umbilicus small; margin of aperture slightly angular above and below.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. VIII. p. 188 (Cyclostoma).

Hab. Himalaya.

Species 31. (Mus. Hanley.)

ALYCÆUS GLABER. *Aly. testâ fulvâ, depresso-conicâ; leviter sulcatâ; anfractibus quaternis, angustatis, apicalibus rubris, ultimo inter marginem aperturæ et tumorem dorsalem bi-calloso; tumore dorsali moderatè inflato, rugato; callo suturali subelongato; umbilico latissimo; margine aperturæ duplicato.*

THE SMOOTH ALYCÆUS. Shell fulvous, depressed-conical; slightly grooved; whorls four, narrow, apical red, last with two calli between the margin of aperture and dorsal tumour; dorsal tumour moderately inflated, wrinkled; sutural callus rather lengthened; umbilicus very broad; margin of aperture double.

BLANFORD. Journ. Asi. Soc. Beng. 1865, Vol. XXXIV. p. 84.

Hab. Aracan Hills.

Species 32. (Fig. *a*, *b*, Mus. Hanley.)

ALYCÆUS SCULPTILIS. *Aly. testâ subviridè-fulvâ, depresso-conicâ, sulcatâ; anfractibus quaternis, rotundis, apicalibus rubris, acuminatis; ultimo, inter marginem aperturæ et tumorem dorsalem angusto, æquali sulcato, subelongato; tumore dorsali elongato, concinnè marginato; callo suturali inconspicuo; umbilico latissimo; margine aperturæ duplicato, parte interno validè crenato.*

THE SCULPTURED ALYCÆUS. Shell greenish-buff, depressed-conical, grooved; whorls four, rounded, apical red, acuminated; last narrowed between margin of aperture and dorsal tumour, narrow, equal, sulcated, rather lengthened; dorsal tumour elongated, neatly edged; sutural callus inconspicuous; umbilicus very broad; margin of aperture double, inner part strongly crenated.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. p. 226.

Hab. Thyet Myo, near British Burmah.

Species 33. (Mus. Brit.)

ALYCÆUS SPIRACELLUM. *Aly. testâ obscurè fuscâ, depressâ, sulcatâ; anfractibus quaternis, angustis, apicalibus succineis; ultimo post aperturam breviter angusto, lævi; tumore dorsali mediocri, margine crasso; umbilico longiùsculo, callo suturali brevissimo, margine aperturæ complanato; umbilico lato.*

THE SPIRACLE ALYCÆUS. Shell dull brown, depressed, grooved; whorls four, narrow, apical amber; last shortly narrowed behind the aperture, smooth; dorsal tumour medium-sized; margin thick; umbilicus rather narrow, sutural callus very short, margin of aperture flattened; umbilicus broad.

ADAMS AND REEVE. Voyage of the 'Sulphur.'

Hab. ——?

Species 34. (Mus. Brit.)

ALYCÆUS GRAPHICUS. *Aly. testâ pallidè fulvâ, conicâ, altâ; anfractibus quinis, apicalibus lævibus, penultimo lirato; ultimo et penultimo acutè liratis, ultimo post aperturæ marginem lævi, gradatim angustato; tumore dorsali inconspicuo; callo suturali brevi, conspicuo; umbilico minuto; aperturæ margine duplicato, parte externo ad juncturam anfractûs interrupto, subaurito, parte interno tenui, paulò producto.*

THE GRAPHIC ALYCÆUS. Shell pale fulvous, conical, high; whorls five, apical smooth, last and last before sharply ridged, last smooth, gradually narrowed behind the margin of the aperture; dorsal tumour inconspicuous; sutural callus short, conspicuous; umbilicus minute; margin of aperture double, outer part interrupted at the juncture of the whorl, slightly aurited; inner part thin, a little produced.

BLANFORD. Journ. Asi. Soc. Bengal, 1862.

Hab. Aracan Hills.

Species 35. (Mus. Brit.)

ALYCÆUS FOOTEI. *Aly. testâ depressâ, albidâ, lævi; anfractibus quaternis; ultimo post marginem aperturæ breviter angustato; tumore dorsali moderatè inflato, concinnè marginato, rugato; aperturæ margine extùs annulis tribus plicato, infra columellam cuneato.*

FOOTE'S ALYCÆUS. Shell depressed, whitish, smooth; whorls four; last shortly narrowed behind the margin of the aperture; dorsal tumour moderately inflated, neatly bordered, wrinkled; margin of aperture plaited in three rings outside, cornered under the columella.

BLANFORD. ——?

Hab. S. India.

Species 36. (Mus. Hanley.)

ALYCÆUS UMBONALIS. *Aly. testâ majùsculâ, depressâ, fulvâ, lævi; anfractibus quinis, apicalibus rubris; ultimo extenso, post aperturæ marginem angusto; tumoris; margine expanso, ad suturam elevato callo suturali elongato; margine aperturæ transversè ovato, latè planato, reflexo; umbilico maximo.*

THE UMBONAL ALYCÆUS. Shell rather large, depressed, fawn, smooth; whorls five, apical red; last extended, elongated behind the aperture; margin of tumour expanded, raised at the suture; sutural callus elongated; margin of aperture transversely ovate, broadly flattened, reflected.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. p. 225.

Hab. Akauktoung, near Irawaddy, Burmah.

38.

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40, a

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40, b.

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G.B. Sowerby, del. et lith.

Vincent Brooks Day & Son, Imp.

ALYCÆUS.

PLATE V.

Species 37. (Mus. Brit.)

ALYCÆUS GEMMULA. *Aly. testâ minutâ, albidâ, depressâ, tenuiter striatâ; ultimo anfractu post aperturæ marginem angusto, medio crassiusculo, tumori dorsali concinnè marginato, moderatè inflato, rugato; callo suturali brevi, conspicuo; aperturæ margine duplicato, parte externâ planatâ, parte internâ productâ.*

THE LITTLE GEM ALYCÆUS. Shell minute, whitish, depressed, finely striated; last whorl behind margin of aperture narrow, thickish in the middle, dorsal tumour neatly bordered, moderately inflated, wrinkled; sutural callus short, conspicuous; margin of aperture double, outer part flattened, inner part produced.

BENSON. Ann. Nat. Hist. Ser. 3, Vol. III. 1859.

Hab. Rungun Valley.

Species 38. (Mus. Brit.)

ALYCÆUS ARMILLATUS. *Aly. testâ lævi, depresso-conicâ, albidâ; ultimo anfractu, post aperturam breviter angustissimo, tum latè calloso, inflato; tumore dorsali subretrorso, margine crasso, calloso; callo suturali conspicuo, breviusculo, aperturæ margine angusto; umbilico latissimo.*

THE COLLARED ALYCÆUS. Shell smooth, depressed conical, whitish; last whorl shortly very narrow, callous behind the aperture, then broadly callous, inflated; dorsal tumour backward, margin thick, callous; sutural callus conspicuous, rather short, margin of the aperture narrow; umbilicus very broad.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. p. 227.

Hab. Thyet Myo near river Irawaddy, Burmah.

Species 39. (Mus. Brit.)

ALYCÆUS POLITUS. *Aly. testâ depressâ, politâ, castaneâ, subtùs albidâ; ultimo anfractu post aperturam constricto, tum longè inflato, ad marginem tumoris depresso et calloso, tumore dorsali inconspicuo, callo suturali albo, brevissimo; umbilico lato; aperturæ margine infrà columellam cuneato.*

THE POLISHED ALYCÆUS. Shell depressed, polished, chestnut, whitish underneath; last whorl constricted behind the aperture, then with a long swelling, depressed and callous at the margin of the dorsal tumour; dorsal tumour inconspicuous; sutural callus white, very short, umbilicus broad; margin of aperture cornered below columella.

BLANFORD. Journ. Asi. Soc. Bengal, 1865.

Hab. Aracan.

Species 40. Fig. *a*, *b*. (Mus. Brit.)

ALYCÆUS HUMILIS. *Aly. testâ parvâ, griseo-albâ, sulcato-striatâ, depressâ; ultimo anfractu inter aperturam et tumorem dorsalem inflato; tumore dorsali breviter conspicuè inflato, callo suturali breviusculo; umbilico lato; margine aperturæ infrà cuneato.*

THE HUMBLE ALYCÆUS. Shell small, grey-white, groove-striated, depressed; last whorl inflated between aperture and dorsal tumour; dorsal tumour shortly conspicuously inflated, sutural callus rather short, umbilicus broad; margin of aperture cornered below.

BLANFORD. Journ. Asi. Soc. Bengal, 1862.

Hab. Akaouktoung, banks of Irawaddy.

Species 41. (Mus. Hanley.)

ALYCÆUS CONSTRICTUS. *Aly. testâ conicâ, altâ, fulvâ, læviusculâ; anfractibus quaternis, elevatis, tertio distanter leviter lirato; ultimo post aperturam breviter angustissimo; tumore dorsali brevi, concinnè marginato, callo suturali brevi; umbilico parvo; margine aperturæ latè reflexo.*

THE CONSTRICTED ALYCÆUS. Shell conical, high, fulvous, rather smooth; whorls four, elevated, third distantly, slightly ridged; last shortly very narrow behind the aperture; dorsal tumour short, neatly bordered; sutural callus short; umbilicus small; margin of aperture broadly reflected.

BENSON. Ann. Nat. Hist., Ser. 2, Vol. VIII. p. 272.

Hab. Sikkim, Himalaya.

Species 42. (Mus. Brit.)

ALYCÆUS BEMBEX. *Aly. testâ albâ, conicâ, altâ, lævi; anfractibus quinis, ultimo post aperturam constricto tùm inflato et constricto; tumore dorsali valdè inflato; callo suturali conspicuo, elongato; aperturæ margine duplicato; umbilico parvo.*

THE BEMBEX ALYCÆUS. Shell white, conical, high, smooth; whorls five, last constricted, then inflated and constricted behind the aperture; dorsal tumour much inflated; sutural callus conspicuous, elongated; margin of aperture doubled; umbilicus small.

BENSON. Ann. Nat. Hist., Ser. 3, Vol. III. 1859.

Hab. Darjeeling, Himalayas.

Species 43. (Mus. Hanley.)

ALYCÆUS CRENULATUS. *Aly. testâ subdepressâ, griseo-albâ; anfractibus quaternis, ultimo post marginem aperturæ breviter, profundè constricto, tum validè inflato, rugato; margine aperturæ crenulato; umbilico majusculo.*

THE CRENULATED ALYCÆUS. Shell subdepressed, grey-white; whorls four, last shortly, deeply, constricted, then much inflated, wrinkled; margin of aperture crenulated; umbilicus rather large.

BENSON. Ann. Nat. Hist., Ser. 3, Vol. III. 1859.

Hab. Rungun Valley.

Species 44. (Mus. Brit.)

ALYCÆUS THEOBALDI. *Aly. testâ conicâ, subdepressâ, distanter liratâ, griseo-albidâ; ultimo anfractu crassiùsculo, post aperturam breviter angusto, callo crasso annulato; tumore dorsali moderatè inflato, rugato; callo suturali elongato, angusto; umbilico latiùsculo; margine aperturæ polygono.*

THEOBALD'S ALYCÆUS. Shell conical, subdepressed, distantly ridged, grey-white; last whorl rather thick, shortly narrow behind the aperture, ringed with a thick callus; sutural callus long, narrow; umbilicus rather broad; margin of aperture polygonal.

BLANFORD. Journ Asi. Soc. Bengal. 1862.

Hab. Khasi Hills.

Species 45. (Mus. Brit.)

ALYCÆUS EXPATRIATUS. *Aly. testâ depressissimâ, fulvâ, tenuiter sulcatâ; anfractibus apicalibus rubris, ultimo longè extenso, post aperturæ marginem callo approximato et altero albo mediano extanti cincto; tumore dorsali albomarginato, valdè inflato; callo suturali breviùsculo, conspicuo; umbilico lato; aperturæ margine tenuiter duplicato.*

THE EXPATRIATED ALYCÆUS. Shell very depressed, fulvous, finely grooved; apical whorls red, last considerably extended, girt behind the margin of the aperture with an approximate callus and another white medial, outstanding; dorsal tumour white-edged, strongly inflated; sutural callus rather short, conspicuous, umbilicus broad; margin of aperture thinly doubled.

BLANFORD. Journ. Asi. Soc. Bengal. 1860, Vol. XXIX. p. 123.

Hab. Nilgherries.

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50, *a*.

50, *b*.

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

ALYCÆUS.

PLATE VI.

Species 46. (Mus. Brit.)

ALYCÆUS STYLIFER. *Aly. testâ compressâ, pallidè fulvâ, lateraliter distortâ; apice acuminato; ultimo anfractu distanter bimarginato, tumore dorsali latè inflato, rugato; callo suturali breviùsculo; umbilico latissimo.*

THE STYLIFER ALYCÆUS. Shell compressed, pale fulvous, laterally distorted; apex acuminated; last whorl with two distant margins; dorsal tumour broadly inflated, wrinkled; sutural callus rather short; umbilicus very broad.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. XIX. 1857.

Hab. Sikkim, Himalaya.

Species 47. (Mus. Brit.)

ALYCÆUS STRANGULATUS. *Aly. testâ depressâ, fulvâ, tenuiter striatâ; ultimo anfractu post marginem aperturæ profundè constricto, tùm callo crasso prominenti irregulari armato; tumore dorsali brevi; callo suturali breviùsculo; umbilico latiùsculo; margine aperturæ duplicato.*

THE STRANGLED ALYCÆUS. Shell depressed, fulvous, finely striated; last whorl deeply contracted behind margin of aperture, then armed with a prominent irregular callus; dorsal tumour short; sutural callus rather short; umbilicus rather broad; margin of aperture double.

HUTTON. MSS. Pfr. Zeitschrift Malak. 1846.

Hab. Landour.

Species 48. (Mus. Theobald.)

ALYCÆUS BIFRONS. *Aly. testâ pallidè fulvâ, depressâ, lævi; anfractibus apicalibus rubris; ultimo anfractu post aperturam longè angustato, callo annulari, et callo albo irregulari prominenti interrupto; tumore dorsali brevi; callo suturali breviùsculo; umbilico lato; margine aperturæ teniùsculo.*

THE TWO-LEAVED ALYCÆUS. Shell pale, fulvous, depressed, smooth; apical whorls red; last whorl with a narrow length behind the aperture, interrupted by an annular and irregular, prominent callus; dorsal tumour short; sutural callus rather short; umbilicus broad; margin of aperture rather thin.

THEOBALD. Journ. Asi. Soc. Bengal, 1870, Vol. XXXIX. Pl. 2, p. 396.

Hab. Shan States.

Species 49. (Mus. Brit.)

ALYCÆUS PROSECTUS. *Aly. testâ depresso-conicâ, pallidè fulvâ, irregulariter sulcatâ et liratâ; ultimo anfractu distorto sublgloboso, post aperturæ marginem breviter angustato, declivi, carinato; tumore dorsali longè inflato; aperturæ margine albo, latè reflexo suprà infràque subaurito; umbilico lato; callo suturali longiùsculo.*

THE SLASHED ALYCÆUS. Shell depressed, conical, pale fulvous, irregularly grooved and ridged; last whorl distorted, subglobose, shortly narrowed behind margin of aperture, sloped, keeled; dorsal tumour lengthily swelled; margin of aperture white, broadly reflected, subaurited above and below; umbilicus broad; sutural callus rather long.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. XIX. 1857.

Hab. Khasi Hills.

Species 50. (Fig. *a*, *b*, Mus. Brit.)

ALYCÆUS FUGORI. *Aly. testâ conicâ, acuminatâ, sulphureâ, ultimo anfractu ventricoso, lateraliter et dorso valdè inflato; post aperturam breviter angustato, tumori dorsali subito et conspicuo; callo suturali brevissimo; aperturâ angustè reflexo.*

THE FUGOR ALYCÆUS. Shell conical, acuminated; sulphur, last whorl ventricose laterally at the back, much inflated, shortly narrowed behind the aperture; dorsal tumour sudden and conspicuous; sutural callus very short; aperture narrow, reflected.

MARTENS. ——? MS. Mus. Brit.

Hab. ——?

MONOGRAPH

OF THE GENUS

MARGARITA.

Of Nature's gifts thou may'st with lilies boast,
And with the half-blown rose.—*Shakspere.*

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2

3

4a

5a

5b

4b

6

7

1b

Sowerby del et lith

Vincent Brooks Day & Son Imp.

MARGARITA.

PLATE I.

Genus MARGARITA. *Leach.*

Testa subtrochæformis, vel heliciformis, intùs et sub tegumentum externum margaritacea, interdum umbilicata, interdum clausa. Apertura magna, simplex. Operculum corneum, subovatum, paucispirale.

Shell trochus- or helix-shaped, pearly inside and beneath the external tegument, sometimes umbilicated, sometimes closed. Aperture large, simple. Operculum horny, subovate, few-whorled.

This genus consists of a few shells that have been grouped together, as having some affinities, but no very definite uniting characters. In the work by Messrs. Adams they are separated into two genera, and other species have been added to each. In the original genus there are umbilicated and non-umbilicated examples; the former are allowed in that work to retain the name now used, while the latter are named 'Photinula.' This plate having been published in a former number, the writer now completes the monograph, including both sections, as left by his late father, in the Conchological Illustrations, with a few additions from specimens in the collection of the British Museum.

Species 1. (Fig. *a*, *b*, Mus. Brit.)

MARGARITA UMBILICALIS. *Mar. testâ magnâ, tenui lævigatâ, fulvâ, obliquâ; umbilico latissimo, aperturâ maximâ, obliquâ, intùs splendidè iridescenti; ultimo anfractu lato, obscurissimè angulato.*

THE UMBILICAL MARGARITA. Shell large, thin, smooth, fulvous, oblique, umbilicus very broad, aperture very large, oblique, splendidly iridescent within; last whorl broad, very obscurely angular.

BRODERIP. Sowerby Con. Ill., p. 13.

Hab. —— ?

Species 2. (Mus. Brit.)

MARGARITA UNDULATA. *Mar. testâ fulvâ, parvâ, depressâ, spiraliter striatâ, ad suturam undulatâ; ultimo anfractu lato; aperturâ magnâ, obliquâ; umbilico angusto, albo.*

THE WAVY MARGARITA. Shell fulvous, small, depressed, spirally striated, waved at the suture; last whorl broad; aperture large, oblique; umbilicus narrow, white.

SOWERBY. Mal. and Conch. Mag. Conch. Ill. Species 12, f. 4.

Hab. Massachusetts Bay.

Species 3. (Mus. Brit.)

MARGARITA SULCATA. *Mar. testâ albâ, depressâ, subtùs lævi, suprà spiraliter liratâ; aperturâ latâ; umbilico lato, subcarinato.*

THE GROOVED MARGARITA. Shell white, depressed, smooth beneath, spirally ridged above; aperture broad; umbilicus broad, subcarinated.

SOWERBY. Mal. and Conch. Mag. p. 26.

Hab. —— ?

Species 4. (Fig. *a*. *b*. Mus. Brit.)

MARGARITA TÆNIATA. *Mar. testa trochæformi, fulvâ, fasciis rubris tæniatâ, lævigatâ; spirâ conicâ, anfractibus quinis, rapidè crescentibus, ultimo magno; aperturâ magnâ, columellâ albâ, crassâ obliquâ, infrà subcuneatâ.*

THE RIBBANDED MARGARITA. Shell trochus-shaped, fulvous, banded with red stripes, smooth, spire conical, whorls five, rapidly increased, last large; aperture large, columella white, thick, oblique, slightly cuneate below.

SOWERBY. Conch. Illus. Species 1, fig. 2.

Hab. Falkland Islands.

Species 5. (Fig. *a*, *b*, Mus. Brit.)

MARGARITA VIOLACEA. *Mar. testâ crassiusculâ, rubrâ, obliquâ, lævi, non umbilicatâ; anfractibus trinis, rapidè crescentibus; ultimo magno, subdepresso, infrà planiusculâ; aperturâ magnâ, obliquâ.*

THE VIOLET MARGARITA. Shell rather thick, red, oblique, smooth, not umbilicated; whorls three, rapidly enlarged; last large, somewhat depressed, rather flattened below; aperture large, oblique.

KING. Zool. Journ. Vol. V. p. 346.

Hab. —— ?

Species 6. (Mus. Brit.)

MARGARITA GRŒNLANDICA. *Mar. testâ subdepressâ, albidâ, lævigatâ; anfractibus trinis, depressis; ultimo expanso; aperturâ magnâ, columellâ tenui, umbilico lato.*

THE GREENLAND MARGARITA. Shell rather depressed, whitish, smooth; whorls three, depressed; last expanded; aperture large, columella thin, umbilicus broad.

BECK. Sowerby, Concĥ. Ill. f. 10.

Hab. Greenland.

Species 7. (Mus. Brit.)

MARGARITA STRIATA. *Mar. testâ trochæformi, fulvâ, spiraliter striatâ, suprà liratâ; spirâ conicâ, anfractibus quinis, ultimo magno; aperturâ rotundâ; umbilico parvo.*

THE STRIATED MARGARITA. Shell trochus-shaped, fulvous, spirally striated; ridged above; spire conical, whorls five, last large; aperture rounded; umbilicus small.

BRODERIP. Zool. Journal IV. Con. Ill. f. 3.

Hab. Northern Ocean?

The larger figure in the Conchological Illustrations, fig. 18, represents a different species, which will be found under the name, *Margarita maxima* in Plate III.

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C.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

MARGARITA.

PLATE II.

Species 8. (Mus. Brit.)

MARGARITA SANDWICHIANA. *Mar. testâ subglobosâ, griseo-fulvâ, spiraliter striatâ, maculis fuscis nigrescentibus tessellatim variegatâ; anfractibus trinis, ultimo magno, subgloboso; aperturâ subrotundâ, columellâ crassiùsculâ, obliquâ; umbilico lato.*

THE SANDWICH ISLANDS MARGARITA. Shell subglobose, greyish fulvous, spirally striated, variegated with blackish-brown tessellated spots; whorls three, last large, subglobose; aperture rather round; columella rather thick, oblique; umbilicus broad.

A. ADAMS. —— ? MS. Mus. Brit.

Hab. Sandwich Islands.

Species 9. (Mus. Brit.)

MARGARITA VULGARIS. *Mar. testâ parvâ, obliquâ, depressâ, albidâ, lævi; anfractibus trinis, ultimo rapidè crescenti; aperturâ magnâ, declivi; columellâ tenui; umbilico parvo.*

THE COMMON MARGARITA. Shell small, oblique, depressed, whitish, smooth; whorls three, last quickly increased; aperture large, sloped; columella thin; umbilicus small.

LEACH, SOWERBY. Conch. Ill. Sp. 5. f. 13.

Hab. Northern Seas.

Species 10. (Mus. Brit.)

MARGARITA SIGARETINA. *Mar. testâ obliquè depressâ, crassiùsculâ, subhaliotoidea, rubrâ, lævigatâ, intùs splendidè iridescenti; aperturâ obliquè ovatâ; maximâ; columellâ albâ, latâ, planulatâ, perobliquâ.*

THE SIGARETA-LIKE MARGARITA. Shell obliquely depressed, rather thick, rather haliotis-shaped, red, smooth, splendidly iridescent within; aperture obliquely ovate, very large; columella white, broad, flattened, very oblique.

SOWERBY. Mal. and Conch. Mag. p. 24; Con. Ill. f. 14.

Hab. —— ?

Possibly a farther knowledge of this species may lead to its placement in the GENA group.

Species 11. (Mus. Brit.)

MARGARITA PULCHERRIMA. *Mar. testâ altâ, trochæformi, subdistanter spiraliter liratâ, inter liris regulariter striatis; liris minutè moniliferis, rubro maculatis; umbilico magno, carinato; columellâ obliquâ.*

THE VERY PRETTY MARGARITA. Shell raised, trochus-shaped, rather distantly spirally ridged, between the ridges regularly striated; ridges minutely beaded, spotted with red; umbilicus large, keeled; columella oblique.

A. ADAMS. —— ?

Hab. Japan.

Species 12. (Mus. Brit.)

MARGARITA CÆRULESCENS. *Mar. testâ cinereâ, depressâ, non umbilicatâ, lævigatâ, angustè tæniatâ; spirâ depresso-conicâ; aperturâ obliquè subquadratâ; columellâ crassâ, latâ, supernè validè arcuatâ.*

THE BLUEISH MARGARITA. Shell ash-coloured, depressed, not umbilicated, smooth, narrowly banded; spire depressed-conical, aperture obliquely squarish; columella thick, broad, strongly arched above.

KING —— ? MS. Brit. Mus.

Hab. —— ?

This species belongs to the Photinula group.

Species 13. (Mus. Brit.)

MAGARITA ACUMINATA. *Mar. testâ cinereo-albâ, altâ, conicâ, acuminatâ; anfractibus quinis; ultimo maximo, subangulato; aperturâ magnâ, columellâ tenui, umbilico angustissimo.*

THE ACUMINATED MARGARETINA. Shell ashy white, high, conical, acuminated; whorls five; last very large, slightly angular; aperture large; columella thin; umbilicus very narrow.

SOWERBY. Mal. and Conch. Mag. p. 26. Con. Ill. f. 7.

Hab. —— ?

Species 14. (Mus. Brit.)

MARGARITA PUNCTATA. *Mar. testâ elevatâ, conicâ, fulvâ; anfractibus senis turritis, suturâ profundâ*

separatis, ultimo supernè bicostato, costis rubro maculatis, infrà striato; umbilico maximo; costato, aperturâ parvâ.

THE SPOTTED MARGARITA. Shell raised, conical fulvous; whorls six, turreted, separated by a deep suture, last with two ribs above, ribs spotted with red; striated below; umbilicus very large, ribbed; aperture small.

A. ADAMS. —— ? MS. Brit. Mus.

Hab. Japan.

Species 15. (Mus. Brit.)

MARGARITA HELICINA. *Mar. testâ parvâ, tenui, roseo-fulvâ, subdepressâ, aperturâ magnâ, umbilico angustissimo, columellâ arcuatâ.*

THE HELICINA MARGARITA. Shell small, thin, pinky-fulvous, rather depressed, aperture large; umbilicus rather narrow, columella arched.

FABRICIUS. Vide Proc. Zool. Soc. 1851.

Hab. —— ?

Species 16. (Mus. Brit.)

MARGARITA ARGENTATA.. *Mar. testâ depresso-globosâ, albidâ, lævi; anfractibus trinis, ultimo maximo, supernè subcarinato; aperturâ magnâ, umbilico majusculo, columellâ arcuatâ.*

THE SILVERY MARGARITA. Shell depressed-globose, whitish, smooth; whorls three, last large, with a slight keel above; aperture large, umbilicus rather large, columella arched.

GOULD. Invert. Mass. p. 256, f. 164.

Hab. Cape Ann.

Species 17. (Mus. Brit.)

MARGARITA ZELANDICA. *Mar. testâ depresso-conicâ, spiraliter sulcatâ, rubro punctatâ; ultimo anfractu subtùs complanato; umbilico lato, carinato; aperturâ parvâ, columellâ validâ, infrà subcuneatâ.*

THE ZEALAND MARGARITA. Shell depressed-conical, spirally grooved, spotted with red; last whorl flattened beneath; umbilicus broad, keeled; aperture small, columella strong, slightly cuneate below.

HUTTON. —— ? MS. Mus. Brit.

Hab. New Zealand.

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

MARGARITA.

PLATE III.

Species 18. (Mus. Brit.)

MARGARITA INCARNATA. *Mar. testâ depresso-conica, rubescenti, lîris moniliferis sculptâ; ultimo anfractu magno, propè suturam concentricè rugatâ; aperturâ magnâ; umbilico mediocri.*

THE FLESH-COLOURED MARGARITA. Shell depressed-conical, reddish; sculptured with beaded ridges; last whorl large, concentrically wrinkled near the suture; aperture large; umbilicus middle-sized.

COUTHOY. —— ? (Ms. Brit. Mus.)

Hab. N. America.

Species 19. (Mus. Brit.)

MARGARITA ARCTICA. *Mar. testâ parvâ, lævi, depressâ, fulvo-grisescenti; ultimo anfractu obliquo, expanso, aperturâ maximâ, obliquè ovatâ; umbilico magno.*

THE ARCTIC MARGARITA. Shell small, smooth, depressed, greyish-fulvous; last whorl oblique, expanded; aperture very large, obliquely ovate; umbilicus large.

LEACH. Sowerby. Conch. Ill. fig. 6.

Hab. Plymouth, Massachusetts.

Species 20. (Mus. Brit.)

MARGARITA COSTELLATA. *Mar. testâ depressâ, subaureâ; anfractibus subturritis, ultimo biangulato, inter angulos spiraliter striato, infrà subplanulato; aperturâ subquadratâ; umbilico parvo, angulato, obliquè carinato.*

THE RIBBED MARGARITA. Shell depressed, slightly gold-tinted; whorls subturretted, last biangular, spirally striated between the angles, rather flattened below; aperture rather square; umbilicus small, angular, obliquely keeled.

SOWERBY. Mal. & Conch. Mag. p. 26.

Hab. —— ?

Species 21. (Mus. Brit.)

MARGARITA CORNEA. *Mar. testâ trochæformi, acuminatâ, fulvo-albidâ, spiraliter liratâ; anfractibus senis, altis, angulatis, ultimo obscurè biangulato, umbilico spiraliter costato, lato; aperturâ subrotundâ, margine crenato; columella arculatâ.*

THE HORNY MARGARITA. Shell trochus-shaped, acuminated, whitish-buff, spirally ridged; whorls six, raised, angular, last obscurely biangular; umbilicus spirally ribbed, broad; aperture rather rounded, margin crenulated; columella arched.

KIENER Icon. pl. 195, fig. 2.

Hab. —— ?

Species 22. (Mus. Brit.)

MARGARITA CARINATA. *Mar. testâ roseo-fulvâ, elevatâ, conicâ, acuminatâ; anfractibus senis, elevatis, angulatis; ultimo propè suturam concentricè lirato, tùm tricarinato, inter carinas lirato; infrà subplanulato; umbilico magnô, margine carinato; aperturâ subtrigono; columellâ obliquâ.*

THE KEELED MARGARITA. Shell pinkish-fulvous, raised, conical, acuminated; whorls six, raised, angular; last concentrically ridged near the suture, then with three keels, rather flattened below; umbilicus large, margin keeled; aperture rather trigonal; columella oblique.

A. ADAMS. Proc. Zool. Soc. 1851, 190.

Hal. Calbalonga, Philippines.

Species 23. (Mus. Brit.)

MARGARITA MODESTA. *Mar. testâ trochæformi, pallidè carneâ, carinatâ, subtùs striatâ; anfractibus quarternis, ultimo magno, angulato; umbilico parvo; aperturâ mediocri, columellâ subobliquâ, tenuiusculâ.*

THE MODEST MARGARITA. Shell trochus-shaped, pale flesh-coloured, keeled, striated below. Whorls four, last large, angular; umbilicus small; aperture middle-sized, columella rather oblique, rather thin.

MIDDENDORF. —— ? Ms. (Brit. Mus.)

Hab. —— ?

Species 24. (Ms. ——? copied).

MARGARITA MAXIMA. *Mar. testâ magnâ, trochæformi, fulvâ; spirâ conicâ; anfractibus senis, ultimo maximo, supernè quinque-carinato, infrà striato, umbilico lato, margine carinato; aperturâ obliquè quadrilaterali, columellâ arcuatâ, infrà cuneatâ, crenulatâ.*

1

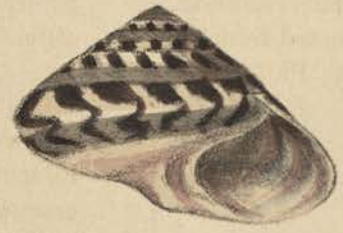
2,a

2,b

3,a

4,a

4,b



3,b

5,a

5,b

3,c

G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

ROTELLA.

PLATE I.

Genus ROTELLA. *Lamarck.*

Testa trochiformis, depressa, orbicularis, solida, superne conica, infrà lenticularis, intùs nacrea; umbilico per callum obtecto; aperturâ subtrigonâ, transversâ, operculum corneum, multispirale planorbiculare.

Shell trochiform, depressed, orbicular, solid, conical above, lenticular beneath, pearly within; umbilicus covered in by a callus; aperture rather trigonal, transverse, operculum horny, planorbicular.

SYN. Umbonium, Link.

The few species to be found towards the end of this monograph which are placed in the British Museum collection under the generic heading of *Ethalia*, do not so well agree with the above description as the more typical *R. vestiaria*. Yet the passage is not very abrupt, and it seems hardly necessary to keep up a distinction upon characters of so little generic importance. The species alluded to are *R. guamensis*, and several others allied to it. The East Indies appear to be the home of the *R. vestiaria*, although varieties of that species are quoted from the Mediterranean. *R. elegans* is from the Philippines, and a variety from the Martinique. *R. gigantea* and other fine species are from Japan.

Species 1. (Mus. Brit.)

ROTELLA CONICA. *Rot. testâ fusco-purpurascenti, crassâ, conicâ, callo ventrali parvo, fusco-fumoso, spiraliter disposito, medio depresso, ultimo anfractu circa callum ventralem depresso.*

THE CONICAL ROTELLA. Shell purplish-brown, thick, conical; ventral callus small, smoky-brown, spirally deposited, depressed in the middle; last whorl depressed round the ventral callus.

ADAMS & REEVE. Voy. Samarang. Proc. Zool. Soc. 1854.

Hab. —— ?

In this dark but richly-coloured shell the form of the callus is peculiar, being formed of semicircular layers placed spirally. It is small, defined, and does not quite occupy the central hollow of the shell.

Species 2. (Fig *a*, *b*, [*c*, in Plate II.] Mus. Brit.)

ROTELLA DEPRESSA. *Rot. utrinque lenticulari, depressâ; anfractibus rapidè crescentibus, ultimo ad marginem rotundo, supernè medio latè fasciato, fasciæ margine regulariter punctato, vel fasciis radiatis variegato; callo expanso, griseo, lenticulari.*

THE DEPRESSED ROTELLA. Shell lenticular on both sides, depressed; whorls rapidly increased, last rounded at the margin, with a broad band in the middle above, margin of band regularly spotted, or variegated with rayed bands; callus expanded, grey, lenticular.

A. ADAMS —— ? MS. Cum. Coll.

Hab. —— ?

Like *Rotella vestiaria*, but with the last whorl more spread.

Species 3. (Fig. *a*, *b*, *c*, Mus. Brit. and Sowerby.)

ROTELLA GIGANTEA. *Rot. testâ altiùsculâ, supernè conicâ, infrà subcomplanatâ; suprà medium tenuiter spiraliter striatâ, griseâ, maculis magnis obliquis nigrescentibus ad suturam et ad angulum ornatâ, aut griseâ immaculatâ; anfractibus propè suturam depressis, suturâ profundâ; callo irregulari, roseo, post columellam angulatim tumido; columellâ crassissimâ, latâ; labio externo supernè producto et depresso.*

THE GIGANTIC ROTELLA. Shell rather high, conical above, rather flattened below; above the middle, thinly spirally striated, grey, ornamented with large oblique black spots at the suture and at the angle, or grey without spots; whorls near the suture depressed, suture deep; callus irregular, pink, angularly tumid behind the columella; columella very thick, broad; outer lip produced and depressed above.

LESSON. Illust. Zool. Pl. 17.

Hab. Japan.

Species 4. (Fig. *a*, *b*, Mus. Brit.)

ROTELLA COSTATA. *Rot. testâ supernè conicâ, altiùsculâ, infrà planiùsculâ, anfractibus ad suturam leviter elevatis tum subdepressis, sulcis spiralibus*

incisis sculptis fusco-grisescenti fasciatim variegatis; infrà angulum lævigatis; callo rubescenti, columellâ crassâ.

THE RIBBED ROTELLA. Shell conical, rather high above, rather flat below; whorls slightly elevated at the suture, then rather depressed; sculptured with spiral incised grooves, variegated with greyish brown in bands; smooth beneath the angle, callus pink; columella thick,

VALENCIENNES. Kiener, Icon. Coq. Viv. Pl. II. f. 5.

Hab. Japan.

Species 5. (Fig. *a*, *b*. Mus. Brit.)

ROTELLA MONILIFERA. *Rot. testâ supernè conicâ altâ, anfractibus spiraliter costatis, ad suturam in costam noduliferam elevatis, griseis fusco variegatis; callo pleno, grisescenti, columellâ obliquâ.*

THE BEADED ROTELLA. Shell conical above, high, whorls spirally ribbed, raised at the suture into a beaded rib, grey, varied with brown; callus full, greyish, columella oblique.

LAMARCK. Sowerby's Genera, No. 14.

Hab. ——?

6a.

3c.

6b.

7.

6c.

6d.

8.

6e.

9.

6f.

G.B. Sowerby, del. et lith.

Vincent Brooks Day & Son, lith.

ROTELLA.

PLATE II.

(Fig. 3, *c*, Mus. Brit.)

ROTELLA DEPRESSA. Var. See Plate I.

Species 6. (Fig. *a*, *b*, *c*, *d*, Mus. Brit. & Sowerby.)

ROTELLA ELEGANS. *Rot. testâ supernè, altâ, conicâ; anfractibus obliquè planatis, variè fasciis maculisque pictis, subtùs planiùsculis; callo crasso, subæqualiter convexo.*

THE ELEGANT ROTELLA. Shell high, conical above; whorls obliquely flattened, variously painted with bands and spots, rather flat beneath; callus thick, rather equally convex.

BECK. Kiener Icon. Coq. Viv. Pl. II. f. 5.

Hab. Philippines.

Most varieties of this species show a black spiral line on the edges of the whorls, and the whorls are slightly flattened. In *Rotella vestiaria* the black line does not occur, and the whorls are fewer and a little convex.

Species 7. (Mus. Brit.)

ROTELLA SUTURALIS. *Rot. testâ depresso-conicâ, lineis strigisque fuscis variegatâ, spiraliter sulcis numerosis sculptâ; anfractibus supernè planatis, ad suturam in costam elevatis; suturâ profundâ; callo lato, rubro.*

THE SUTURED ROTELLA. Shell depressed conical, variegated with brown lines and stripes, spirally sculptured with numerous grooves; whorls flattened above, raised in a rib at the suture; suture deep; callus broad, red.

LAMARCK. Chenu Conch. Cab. Pl. 19, f. 186–7.

Hab. Indian Seas.

More closely sculptured than *Rotella costata*, and with the whorls more raised at the suture.

Species 8. (Mus. Brit.)

ROTELLA JAVANICA. *Rot. testâ altâ, conicâ, ad suturam moniliferâ; anfractibus supernè subcomplanatis, suprà angulum lineis spiralibus ornatis, subtùs angulum interruptim fasciatâ; callo ventrali crasso, griseo-fusco.*

THE JAVA ROTELLA. Shell high, conical, beaded at the suture; whorls rather flattened above, ornamented with spiral lines above the angle, and an interrupted band below the angle; ventral callus thick, greyish-brown.

LAMARCK. Anim. S. Vert.

Hab. Java.

Species 9. (Mus. Brit.)

ROTELLA SAGITTATA. *Rot. testâ subdepressâ, supernè conicâ, maculis sagittatis nigris in series spirales dispositis ornatâ, subtùs vix convexâ; callo parvo, albo, circumscripto.*

THE ARROW-HEADED ROTELLA. Shell sub-depressed, conical above, ornamented with arrow-head black spots placed in spiral rows, hardly convex below; callus small, white, circumscribed.

HINDS. Voy. Sulphur.

Hab. —— ?

This pretty little shell differs from *R. elegans* chiefly in the arrow-headed markings and the circumscribed callus.

10 a.

10 b.

10 c.

11.

12 a.

12 b.

12 c.

12 d.

12 e.

12 f

G.B. Sowerby, del et lith.

Vincent Brooks, Day & Son, Imp.

ROTELLA.

PLATE III.

Species 10. (Fig. *a*, *b*, *c*, Mus. Sowerby.)

ROTELLA INFRAPLANATA. *Rot. testâ supernè conicâ, altâ, infrà subconcavâ; anfractibus supernè planatis, variè pictis, infrà angulum circà callum ventralem griseo variegatâ; callo parvo, subconcavo; columellâ obliquâ, ad terminum angulatum.*

THE FLAT-BOTTOMED ROTELLA. Shell conical above, high, almost concave; whorls flattened above, variously painted, variegated with gray; callus small, rather concave; columella oblique, angular at the end.

SOWERBY.

Hab. ——?

We have several varieties of this conical shell. The upper part is like *R. elegans*, with greater elevation, but the lower is much more flattered than that or any other species.

Species 11. (Mus. Brit.)

ROTELLA ZELANDICA. *Rot. testâ altâ, conicâ, rubescenti, fusco-rubescenti radiatim strigatâ, ad angulum spiraliter tri-liratâ; anfractibus infrà suturam subconcavis, subtùs convexiùsculis; callo ventrali griseo-rubescenti, purpureo circumscripto.*

THE NEW ZEALAND. Shell high, conical, reddish, radiately striped with reddish-brown, spirally three-ridged at the angle; whorls rather concave below the suture, rather convex underneath; ventral callus reddish-grey, circumscribed with purple.

A. ADAMS.

Hab. New Zealand.

Species 12. (Mus. Brit.)

ROTELLA VESTIARIA. *Rot. testâ depressâ, fasciis, strigis, maculisque variè pictâ; anfractibus supernè subconcavis; callo ventrali crasso, lenticulari.*

THE WARDROBE ROTELLA. Shell depressed, variously painted with bands, stripes, and spots; whorls rather concave above; ventral callus thick, lenticular.

SOWERBY. Genera of Shells.

Rotella lineolata (var.) Lamarck.

Rotella rosea, Chemnitz?

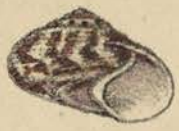
Hab. East Indies.

The upper part of the whorls are a little convex, while those of *R. elegans* are quite flattened.

13.

14.

15.



18 a.

16.

17.

18 b.

19 a.

20.

19 b.

G.B. Sowerby del. et lith.

Vincent Brooks, Day & Son, Imp.

ROTELLA.

PLATE IV.

Species 13. (Mus. Brit.)

ROTELLA STRIOLATA. *Rot. testâ cinnamomeâ, fusco variegatâ, spiraliter striatâ, suprà infràque subæqualiter convexâ; callo ventrali angusto, trilobato.*

THE STRIATED ROTELLA. Shell cinnamon variegated with brown, spirally striated, nearly equally convex above and below; ventral callus narrow, trilobate.

A. ADAMS. (*Ethalia*), Pro. Zool. Soc. 1853.

Hab. —— ?

The callus is in three parts, one rounded above, one spread circularly over the umbilicus, and the third forming a thickened margin to the columella.

Species 14. (Mus. Brit.)

ROTELLA CANDIDA. *Rot. testâ parvâ, subglobosâ, lævi, albâ, opacâ; callo ventrali parvâ, rotundâ; columellâ latiùsculâ; aperturâ magnâ.*

THE WHITE ROTELLA. Shell small, rather globose, smooth, white, opaque; ventral callus small, round; columella rather broad; aperture large.

A. ADAMS. (*Ethalia*), Proc. Zool. Soc. 1862, p. 296.

Hab. Gotto Islands, Japan.

This minute species is less like a *Rotella* than other species of *Ethalia*.

Species 15. (Mus. Brit.)

ROTELLA PERSPICUA. *Rot. testâ minutâ, albâ, compressâ, lenticulari; aperturâ transversè ovatâ; callo ventrali semilunari.*

THE PERSPICUOUS ROTELLA. Shell minute, white, compressed, lenticular; aperture transversely ovate; ventral callus semilunar.

A. ADAMS. (*Ethalia*), Annals of Natural History, 1861.

Hab. China.

Very simple in form and character.

Species 16. (Mus. Brit.)

ROTELLA BRAZIERI. *Rot. testâ transversè ovatâ, depressâ, minutâ, albâ, semipellucidâ; callo ventrali parvo, rotundo, ad columellam continuo; aperturâ magnâ.*

BRAZIER'S ROTELLA. Shell transversely ovate, depressed, minute, white, semipellucid; ventral callus small, rounded, continued at the columella; aperture large.

ANGUS. (*Ethâlia*), Proc. Zool. Soc. 1877, p. 39, Pl. 5, f. 17.

Hab. Sow and Pigs Reef, Port Jackson, Australia.

Species 17. (Mus. Brit.)

ROTELLA POLITA. *Rot. testâ subglobosâ, albâ, politâ; spirâ conicâ, anfractibus paucis; callo ventrali ferè obsoletâ.*

THE POLISHED ROTELLA. Shell subglobose, white, polished; spire conical, whorls few; ventral callus almost obsolete.

A. ADAMS. (*Ethalia*), Annals of Nat. Hist. 1862, p. 296.

Hab. Gotto, Japan.

Species 18. (Fig. *a*, *b*, Mus. Brit.)

ROTELLA GUAMENSIS. *Rot. testâ altiùsculâ, subglobosâ; variè pictâ, lævigatâ; anfractibus supernè versùs suturam tumidis; angulo centrali rotundo, infrà convexis, callo reniformi, rosea; columellâ latè callosâ.*

THE GUAM ROTELLA. Shell rather high, subglobose; variously painted, smooth; whorls above towards the suture tumid; central angle rounded, convex below, callus kidney-shaped, pinky; columella broadly callous.

QUOY. Voy. Astrolabe, Pl. 61, f. 32-33.

Hab. Isl. Guam. — Luzon; Philippines.

This is the type of the genus *Ethalia*, which, however little like *Rotella* in general form, has the same essential characters.

Species 19. (Fig. *a*, *b*, Mus. Brit.)

ROTELLA SOBRINA. *Rot. testâ minutâ, planorbulari, compressâ, albâ, opacâ; infrà umbilicatâ, anfractibus rotundis.*

THE RELATED ROTELLA. Shell minute, planorbular, compressed, white, opaque; umbilicated below, whorls rounded.

A. ADAMS. (*Ethalia*), Ann. of Nat. Hist. 1861, Vol. VIII. 306.

Species 20. (Mus. Brit.)

ROTELLA TRILOBATA. *Rot. testâ pallidè griseo-olivaceâ, subdepressâ, maculis strigisque variè pictâ; anfractibus supernè convexiùsculis; umbilico infundibuliformi; callo parvo in partes tres semicirculares diviso.*

THE TRILOBATE ROTELLA. Shell pale grey-olive, subdepressed, variously painted with spots and stripes; whorls rather convex above; umbilicus funnel-shaped; callus small, divided into three semicircular parts.

SOWERBY.

Hab. ——?

In this species, the form of the callus is very peculiar, resembling that of *R. striolata*, but more pronounced in character. In rotundity of whorls the species is midway between the latter and *R. Guamensis*.

MONOGRAPH

OF THE GENUS

STYLIFER.

Frank Nature, rather curious than in haste,
Hath well compos'd thee.—*Shakspere.*

1a.

2.

3.

4.

5.

6.

7.

8.

9.

1b.

G.B. Sowerby, del. et lith.

Vincent Brooks Day & Son Imp.

STYLIFER.

PLATE I.

Genus STYLIFER. *Broderip.*

Testa tenuissima, plerumque pellucida aut semi-pellucida, lævis, polita, multispiralis, subulata vel subglobosa; apice obliquo, styliformi; labio externo sinuatim producto.

Shell very thin, generally pellucid or semi-pellucid, smooth, polished, multispiral, subulate or subglobose; apex oblique, styliform; outer lip sinuously produced.

The mollusca secreting these glassy little shells are parasitic on star-fishes and Echini, burrowing under the skin, and forming tumours which appear externally. One species is found among the spines of our common Echinus, and the first species described by Mr. Broderip infects a starfish of the shores of Galapagos islands.

Species 1. (Fig. *a*, *b*. Mus. Brit.)

STYLIFER TURTONI. *Sty. testâ subglobosâ, parvâ, spirâ acuminatâ, productâ, anfractibus supernè angulatis, apicalibus minutis papillosis, ultimo magno, subrectilaterali.*

TURTON'S STYLIFER. Shell subglobose, small, spire acuminated, produced, whorls angular above, apical minute papillose, last large, subrectilateral.

BRODERIP. Proc. Zool. Soc. 1832, p. 61.

Hab. On British Echini.

Species 2. (Mus. Brit.)

STYLIFER OVOIDEA. *Sty. testâ subglobosâ, spirâ moderatè productâ, anfractibus subrotundis, apicalibus minutissimis; aperturâ pyriformi, labio externo supernè subcompresso, sinuatim producto.*

THE EGG-SHAPED STYLIFER. Shell subglobose, spire moderately produced, whorls rather round, apical very minute; aperture pyriform, outer lip slightly compressed above, sinuously produced.

A. ADAMS. Proc. Zool. Soc.

Hab. ——

Species 3. (Mus. Brit.)

STYLIFER ASTERICOLA. *Sty. testâ ovato-globosâ, spirâ brevi acuminatâ; anfractibus paucis, apicali minuto, aperturâ angustiusculâ, infrà subacuminatâ; labio externo supernè sinuatim producto.*

THE STARFISH STYLIFER. Shell ovate-globose; spire short, acuminated, whorls few, apical minute; aperture rather narrow, slightly pointed below, outer lip sinuously produced above.

BRODERIP. Sowerby's Conchological Manual, f. 12–13.

Stylifer Broderipii. Adams.

Hab. Galapagos.

Species 4. (Mus. —— ?)

STYLIFER GUENTHERI. *Sty. testâ majusculâ, turritâ, pyramidatâ; apice producto, acuminato, anfractibus gradatis, supernè angulatis, ultimo magno, globoso, inflato; sinu columellari retrorsùm extenso.*

GÜNTHER'S STYLIFER. Shell rather large, turreted pyramidal; apex produced, acuminated, whorls step-like, angular above; last large, globose, inflated; columellar sinus extended backwards.

ANGAS (Apicalia). Proc. Zool. Soc. 1877, Pl. V. f. 6.

Hab. New South Wales.

A singularly formed shell, partaking the characters of the globose and subulate sections.

Species 5. (Mus. Brit.)

STYLIFER CUMINGIANA. *Sty. testâ pyramidatâ, spirâ altâ, acuminatâ; anfractibus numerosis, depressis, apicalibus trinis aut quaternis attenuatis, styliformibus, ultimo inflato, rotundo, aperturâ brevi, columellâ rectiusculâ.*

CUMING'S STYLIFER. Shell pyramidal, spire raised, acuminated; whorls numerous, depressed, three or four apical attenuated, styliform, last inflated, round, aperture short, columella rather straight.

ADAMS —— ? MS. Cum. Coll.

Hab. —— ?

Species 6. (Mus. Brit.)

STYLIFER SOLIDA. *Sty. testâ subulatâ, solidiùsculâ, opacâ; spirâ altissimâ, anfractibus numerosis, apicalibus parvis; apice tortuo; aperturâ breviùsculâ, infrà acuminatâ.*

THE SOLID STYLIFER. Shell subulate, rather solid, opaque; spire very high, whorls numerous, apical small; apex tortuous; aperture rather short, acuminated below.

A. ADAMS. MS. Cum. Coll.

Hab. —— ?

Species 7. (Mus. Brit.)

STYLIFER BARRONII. *Sty. testâ breviùsculâ, spirâ acuminatâ, anfractibus ultimo et penultimo cylindricis, supernè angulatis; aperturâ oblongâ, infrà subexpansâ, columellâ crassiùscula.*

BARRON'S STYLIFER. Shell rather short, spire acuminated, last whorl and last but one cylindrical, angular above; aperture oblong, slightly expanded below; columella rather thick.

A. ADAMS. PROC. Zool. Soc. 1854, p. 137.

Hab. —— ?

Species 8. (Mus. Brit.)

STYLIFER DUBIA. *Sty. testâ globosâ, spirâ productâ, pyramidatâ, acuminatâ, anfractibus apicalibus attenuatis, penultimo subinflato, ultimo valdè inflato, rotundo; aperturâ pyriformi, labio externo flexuoso.*

THE DOUBTFUL STYLIFER. Shell globose, spire produced, pyramidal, acuminated, apical whorls attenuated, last but one slightly inflated, last much inflated, rounded; aperture pyriform, outer lip flexuous.

BAIRD. MS. Brit. Mus.

Hab. New Caledonia.

Species 9. (Mus. Brit.)

STYLIFER JAPONICA. *Sty. testâ solidiùsculâ, globosâ, brevi; spirâ productâ, attenuatâ, acuminatâ; ultimo anfractu globoso, aperturâ breviusculâ, infrà acuminatâ, columellâ tortuâ, solidiùsculâ.*

THE JAPAN STYLIFER. Shell rather solid, globose, short; spire produced, attenuated, acuminated, last whorl globose, aperture rather short, acuminated below; columella tortuous, rather solid.

A. ADAMS (Amaurella), MS. Brit. Mus.

Hab. —— ?

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G.B. Sowerby del. et lith.

Vincent Brooks Day & Son Imp.

STYLIFER.

PLATE II.

Species 10. (Mus. —— ?)

STYLIFER SPECIOSA. *Sty. testâ subulatâ hyalinâ, spirâ elevatâ, supernè styliformi attenuatâ tortuâ; anfractibus inferioribus inflatis, subrectilateralibus; aperturâ brevi, columellâ rectiùsculâ.*

THE SPECIOUS STYLIFER. Shell subulate, hyaline; spire elevated, styliform attenuated, tortuous above; lower whorls inflated, rather straight-sided; aperture short, columella rather straight.

A. ADAMS. Proc. Zool. Soc. 1868.

Hab. Mauritius.

Species 11. (Mus. Brit.)

STYLIFER ATTENUATA. *Sty. testâ angustè pyramidatâ, spirâ altissimâ, apice obliquè distorto, acutissimo; anfractibus numerosis, rectilateralibus, ultimo infrà medium subangulato; aperturâ angustâ, infrà acuminatâ.*

THE ATTENUATED STYLIFER. Shell narrowly pyramidal, spire very high, apex obliquely distorted, very sharp; whorls numerous, straight-sided, last rather angular below the middle; aperture narrow, acuminated below.

SOWERBY.

Hab. St. Thomas.

Species 12. (Mus. Brit.)

STYLIFER CORALLINA. *Sty. testâ pyramidatâ, angustiùsculâ; apice acuminato, obliquè subinclinato; anfractibus quaterdecenis ad suturam subangulatis, aperturâ parvâ, infrà subangulatâ.*

THE CORALLINE STYLIFER. Shell pyramidal, rather narrow; apex acuminated, slightly inclined obliquely; whorls fourteen, slightly angular at the suture; aperture small, slightly angular below.

CHEMNITZ —— ?

Hab. —— ?

Species 13. (Mus. Brit.)

STYLIFER SUBANGULATA. *Sty. testâ pyramidatâ, altissima; apice acuminato, lateraliter obliquè inclinato; anfractibus quaterdecenis, apicalibus angustissimis, ultimo infrà medium subangulato; aperturâ ovatâ, labio esterno supernè sinuatim producto.*

THE SUBANGULAR STYLIFER. Shell pyramidal, very high, apex acuminated; laterally obliquely inclined; whorls fourteen, apical very narrow, last rather angular below the middle; aperture ovate, outer lip sinuously produced above.

A. ADAMS. Proc. Zool. Soc. 1855, p. 122.

Hab. —— ?

Species 14. (Mus. Brit.)

STYLIFER EXARATA. *Sty. testâ solidiùsculâ, altâ, attenuatâ, anfractibus altiùsculis, convexis, obscurè, rugatis ultimo elevato; aperturâ subquadratâ, parvâ columellâ rectiùsculâ.*

THE PLOUGHED STYLIFER. Shell rather solid, high, attenuated, whorls rather high, convex, obscurely wrinkled, last raised; aperture rather square, small; columella rather straight.

A. ADAMS —— ?

Hab. —— ?

Species 15. (Mus. Brit.)

STYLIFER THOMASIÆ. *Sty. testâ altissimâ, pyramidatâ, versùs apicem subitò contracto, attenuato; apice acuminato, rectiùsculo, anfractibus medianis altis, subcylindricis, ultimo obtusè angulato; aperturâ obliquè subquadratâ, columellâ rectiùsculâ, infrà acuminatâ.*

THE ST. THOMAS STYLIFER. Shell very high, pyramidal, contracted suddenly towards the apex, attenuated; apex acuminated, rather straight, middle whorls high, rather cylindrical, last obtusely angular; aperture obliquely subquadrate, columella rather straight, acuminated below.

SOWERBY.

Hab. Isl. St. Thomas.

Species 16. (Mus. Brit.)

STYLIFER FASTIGIATA. *Sty. testâ pyramidali, ventricosâ, subperforatâ, altâ; spirâ acuminatâ, apice attenuatâ, obliquè inclinato; anfractibus numerosis, convexiùsculis, ultimo magno, rotundo; aperturâ angustâ, columellâ tenui, infrà acuminatâ.*

THE SHARP-POINTED STYLIFER. Shell pyramidal, ventricose, slightly perforated, high; spire acuminated, apex attenuated, obliquely bent; whorls numerous, rather convex, last large, round; aperture narrow, columella thin, acuminated below.

A. ADAMS —— ? MS. Cum. Coll.

Hab. —— ?

Species 17. (Mus. Brit.)

STYLIFER SUBULATA. *Sty. testâ tenuissimâ, pellucidâ, pyramidatâ, versùs apicem subito in stylum contractâ et obliquè inclinatâ; anfractibus convexiùsculis, ultimo magno, rotundo; aperturâ breviùsculâ, labio externo suprà medium flexuosim producto.*

THE SUBULATE STYLIFER. Shell very thin, pellucid, pyramidal, suddenly contracted to a style towards the apex, and obliquely bent; whorls rather convex, last large, rounded; aperture rather short, outer lip flexuously produced above the middle.

BRODERIP. Pro. Zool. Soc. 1832, p. 61.

Hab. W. Indies.

Species 18. (Mus. Brit.)

STYLIFER BULBIFORMIS. *Sty. testâ subopacâ, breviusculâ, spirâ pyramidatâ, apice attenuato, acuminato, obliquè distorto; ultimo anfractu magno, rotundo, inflato; aperturâ brevi, pyriformi; columellâ crassiùsculâ, labio externo flexuoso.*

THE BULB-SHAPED STYLIFER. Shell rather short, subopaque, spire pyramidal, apex attenuated, acuminated, obliquely distorted; last whorl large, round, inflated; aperture short, pyriform; columella rather thick, outer lip flexuous.

SOWERBY.

Hab. —— Isl. St. Thomas.

Species 19. (Mus. Brit.)

STYLIFER GLABRATA. *Sty. testâ parvâ, albâ, politâ, ovato-oblongâ; aperturâ oblongâ longitudine spiræ æquanti; spirâ pauci-spirali; ultimo anfractu subovato, elongato; columellâ recti*usculâ.

THE POLISHED STYLIFER. Shell small, white, polished, ovate-oblong; aperture oblong, equalling spire in length; spire with few whorls, last whorl subovate, elongated; columella rather straight.

A. ADAMS. (Amaurella) MS. Brit. Mus.

Hab. Japan.

Species 20. (Mus. Brit.)

STYLIFER SEMISTRIATA. *Sty. testâ parvâ, ovatâ, albâ, partim tenuissimè striatâ; spirâ quam aperturâ longiùsculâ, anfractibus quaternis, ultimo ventricoso, oblongo; aperturâ ovatâ, breviusculâ.*

THE HALF-STRIATED STYLIFER. Shell small, ovate, white, partly very finely striated; spire rather longer than aperture; whorls four, last ovate, oblong; aperture ovate, rather short.

A. ADAMS. (Amaurella) MS. Brit. Mus.

Hab. Japan.

This and the previous species are of very doubtful generic attributes. Quite possibly they may be Stylifers, but on the other hand, they may belong to a different part of the system.

MONOGRAPH

OF THE GENUS

AURICULA

Nothing we see, but means our good,
As our delight, or as our treasure;
The whole is either our cupboard of food,
Or cabinet of pleasure.—*George Herbert.*

1a.

2a.

2b.

1b.

G.B. Sowerby, del. et lith

Vincent Brooks Day & Son, Imp

AURICULA.

PLATE I.

Genus AURICULA. *Lamarck.*

Testa oblonga, breviter spiralis, epidermide fuscâ induta; aperturâ elongatâ, margine infrà integro, labio interno plicato et calloso; labio externo interdùm internè, interdùm ad marginem plicato; operculum nullum.

Shell oblong, briefly spiral, covered with a brown epidermis; aperture elongated, margin entire below, inner lip plaited and callous; outer lip sometimes plaited internally, sometimes at the margin; operculum none.

Including Ellobium, *Bolten*; Cassidula, *Fer.*; Plecotrema, *Adams*; Alexia, *Leach*; Tralica, *Gray*; Mælampus, *Montf.*; Marinula, *King*.

The Auriculæ are found in salt-marshes, on mud-banks, among the roots of mangrove-trees, and at the mouths of rivers, principally in tropical countries, particularly those of the eastern hemisphere. China, Borneo, Malacca, the Philippines, and the more southern parts of Australia produce many of the species. A few are found in W. Columbia and the South Sea Islands. The West India Islands produce several well-known species. With regard to the various genera into which the different forms have been divided, it is probable that some of them may be usefully retained, but they are difficult to define, and require entire revision.

Species 1. (Fig. *a*, *b*, Mus. Sowerby.)

AURICULA MIDÆ. *Aur. testâ magnâ, cylindricâ, crassâ, epidermide fuscâ indutâ; spirâ conicâ, brevi; anfractibus granosè sculptis; ultimo cylindrico, lævi, lateraliter univaricoso, rudè suprà infràque granoso; aperturâ elongatâ, auriformi, medio contracto, labio interno longitudinaliter calloso, infrà biplicato, labio externo crasso, latè planato, cum columellâ confluenti.*

MIDAS' AURICULA. Shell large, cylindrical, thick, covered with a brown epidermis; spire conical, short; whorls sculptured in grains; last cylindrical, smooth, with a lateral varix, coarsely granular above and below. Aperture elongated, ear-shaped, contracted in the middle, inner lip longitudinally callous, with two plaits, outer lip thick, broadly flattened, confluent with columella.

LAMARCK. Nat. Hist. An. s. Vert.

Voluta auris Midæ. Linnæus.

Hab. Indian Seas.

Figures *a* and *b* represent two prevailing forms of this familiar shell.

Species 2. (Fig. *a*, *b*, Mus. Brit.)

AURICULA MALCHI. *Aur. testâ oblongo-subovatâ, epidermide fusco indutâ, longitudinaliter rugatâ; spirâ productâ, anfractibus supernè subangulatis, distanter nodosis, ad suturam marginatis et crenulatis; aperturâ breviùsculâ, infrà latiùsculâ, columellâ biplicatâ; labio crasso, intùs declivi.*

MALCHUS'S AURICULA. Shell oblong-subovate, covered with a brown epidermis, longitudinally wrinkled; spire produced, whorls somewhat angular above, distantly nodose, bordered and crenulated; aperture rather short, rather broad below; lip thick, sloped within.

MÜLLER. Chemn. Conch. Vol. IX. Pl. CXXI. f. 1037.

Hab. —— ?

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G.B. Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

AURICULA

PLATE II.

Species 3. (Mus. Sowerby.)

AURICULA STAGNALIS. *Aur. testâ angustâ, elongatâ, tenui, epidermide pallidâ tenui indutâ; spirâ productâ, anfractibus quaternis, penultimo alto, convexo, supernè granoso, ultimo infrà latiùsculo, columellâ triplicatâ, labio externo angusto, depresso.*

THE STILL-WATER AURICULA. Shell narrow, elongated, thin, covered with a pale, thin epidermis; spire produced, whorls four, last high, convex, granular above, last rather broad below, columella three-plaited, outer lip narrow, depressed.

D'ORBIGNY. Voy. Amér. Mérid. p. 325, Pl. XLII. f. 7, 8.

Hab. S. America.

Species 4. (Mus. Brit.)

AURICULA GANGETICA. *Aur. testâ subcylindricâ, tenuiùsculâ, epidermide stramineâ tenui indutâ; spirâ breviùsculâ, anfractibus tumidis, subdepressis, ultimo supra aperturam elevato; aperturâ infrà subexpansâ; columellâ biplicatâ.*

THE GANGES AURICULA. Shell rather cylindrical, rather thin, covered with a thin straw-coloured epidermis; spire rather short, whorls tumid, slightly depressed, last raised above the aperture; aperture slightly expanded below; columella with two plaits.

BENSON. Ann. Mag. Nat. Hist.

Hab. Bombay.

Species 5. (Mus. Brit.)

AURICULA CEYLONICA. *Aur. testâ subcylindricâ, spirâ breviùsculâ, infrà subangulatâ, subpyramidatâ; ultimo anfractu supernè latiùsculâ, angulatâ; aperturâ elongatâ, angustiùsculâ; columellâ biplicatâ, labio externo supernè angulato.*

THE CEYLON AURICULA. Shell subcylindrical, spire rather short, rather angular below, subpyramidal; last whorl rather broad above, angular; aperture elongated, rather narrow; columella with two plaits; outer lip angular above.

A. ADAMS. Proc. Zool. Soc. 1854, p. 10.

Hab. Ceylon.

Species 6. (Mus. Brit.)

AURICULA TORNATELLINIFORMIS. *Aur. testâ subcylindricâ, tenuiùsculâ, epidermide tenui pallidâ indutâ; spirâ pyramidali, ultimo supernè tumido, infrà subgibbosâ; aperturâ breviùsculâ, infrà rotundâ, supernè angulatâ; margine crassâ, planulatâ; columellâ biplicatâ.*

THE TORNATELLA-LIKE AURICULA. Shell subcylindrical, rather thin, covered with a thin, pale epidermis; spire pyramidal, last tumid above, rather gibbous below; aperture rather short, rounded below, slightly angular above; margin thick, flattened; columella two-plaited.

PETIT. Proc. Zool Soc. 1854, p. 7.

Hab. —— ? Brit. Mus. La. Bourgay

A peculiar roundness at the confluence of the two sides of the aperture suggests the form of tornatella.

Species 7. (Mus. Brit.)

AURICULA HELVACEA. *Aur. testâ tenui, pallidè rubrâ; spirâ brevi, obtusâ, ultimo anfractu cylindricâ, supernè tenuiter liratâ; aperturâ infrà latiùsculâ, columellâ triplicatâ, labio externo angusto, planulato.*

THE PALE RED AURICULA. Shell thin, pale red; spire short, obtuse, last whorl cylindrical, finely ridged above; aperture rather broad below, columella three-plaited, outer lip narrow, flattened.

PHILIPPI. Proc. Zool. Soc. 1854, p. 8.

Hab. Malacca.

Shaped something like *Auriculæ Judæ*, but without the same solidity of substance and epidermis, and broadness of outer lip.

Species 8. (Mus. Brit.)

AURICULA SEMISCULPTA. *Aur. testâ oblongâ, angustâ, pallidâ, cylindricâ; spirâ brevi, anfractibus supernè densè sagrinatis; aperturâ supernè angustâ, infrà latiùsculâ, labio externo angusto, supra medium sinuatim contracto; plicis columellaribus duabus, prominentibus.*

THE HALF-SCULPTURED AURICULA. Shell oblong, narrow, pale, cylindrical; spire short, whorls closely

shagreened above; aperture narrow above, rather broad below, outer lip narrow, sinuously contracted above the middle; columellar plaits two, prominent.

A. ADAMS. —— ?

Hab. Gambier's Island.

The sculpture on the upper part of the whorls is very beautiful, observed through a lens.

Species 9. (Mus. Brit.)

AURICULA DUNKERI. *Aur. testâ cylindricâ, subpyramidatâ, pallidè rubescenti; spirâ productâ, anfractibus subturritis, convexiùsculis; aperturâ breviùsculâ, subpyriformi, margine latissimè planatâ, castaneâ, columellâ triplicatâ.*

DUNKER'S AURICULA. Shell cylindrical, rather pyramidal, pale reddish; spire produced, whorls rather turreted, rather convex, aperture rather short, rather pyriform, margin very broadly flattened, chestnut, columella with three plaits.

PFEIFFER. —— ?

Hab. —— ?

Species 10. (Mus. Brit.)

AURICULA PALLESCENS. *Aur. testâ cylindricâ, tenui, pallidâ; spirâ acuminatâ, productâ; ultimo anfractu supernè angulatâ; aperturâ breviùsculâ; columellâ infrà biplicatâ; labio externo supernè angulato, medio et infrà incrassato.*

THE PALE AURICULA. Shell cylindrical, thin, pale; spire acuminated, produced; last whorl angular above; aperture rather short; columella with two plaits below, outside lip rather angular above, thickened at the middle and under.

PETIT. —— ? Proc. Zool. Soc. 1854, p. 10.

Hab. —— ?

Species 11. (Mus. Sowerby.)

AURICULA CHINENSIS. *Aur. testâ elongatâ, crassâ; epidermide lævi, crassâ pallidè castaneâ indutâ; spirâ productâ, convexâ, obtusâ; aperturâ breviùsculâ, columellâ crassâ, infrà callosâ, plicis duabus validis munitâ; labio externo crasso, lato, supra medium, tumido, suturam versus angulato et sinuato.*

THE CHINESE AURICULA. Shell elongated, thick; covered with a smooth, thick pale chestnut epidermis; spire produced, convex, obtuse; aperture rather short, columella thick, callous below, guarded with two strong plaits; outer lip thick, broad, tumid above the middle, angular and sinuated towards the suture.

PFEIFFER. Proc. Zool. 1854, p. 152.

Hab. Chinese Seas.

Species 12. (Mus. Sowerby.)

AURICULA SUBULA. *Aur. testâ elongatâ, angustâ, olivaceâ, tenui; spirâ elongatâ, attenuatâ; aperturâ brevi, labio externo tenui, columellâ infrà subarcuatâ, truncatâ.*

THE AWL AURICULA. Shell elongated, narrow, olive, thin; spire elongated, attenuated; aperture short, outer lip thin, columella rather arched below, truncated.

GUOY. Voy. Astro. Pl. XIII. f. 39, 40.

Hab. Cuba.

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16a.

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16b.

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G.B. Sowerby, del et lith.

Vincent Brooks Day & Son Imp

AURICULA.

PLATE III.

Species 13. (Mus. Brit.)

AURICULA SAGATA. *Aur. testâ cylindricâ, angustâ, epidermide fuscâ, crassâ, leviter sulcatâ indutâ; spirâ producti, anfractibus rectilateralibus, ultimo oblongo; infrà tumido, subtruncatâ; aperturâ breviusculâ, angustâ; margine carneo, labio externo supra medium inflexo; columellâ infrà crassâ, leviter bidentatâ, prope medium acutè unidentatâ.*

THE BAGGED AURICULA. Shell cylindrical, narrow, covered with a brown, thick, slightly grooved epidermis; spire produced, whorls straight-sided, last oblong, swelled, rather truncated below; aperture rather short, narrow; margin flesh-coloured, outer lip bent inwards above the middle; columella thick below, with two slight teeth and one sharp near the middle.

PFEIFFER. Proc. Zool Soc. 1854, p. 121.

Hab. Bay of Manilla.

Species 14. (Mus. Brit.)

AURICULA SEMIPLICATA. *Aur. testâ tenui, angustâ, olivaceâ; spirâ attenuatâ, elongatâ; anfractibus supra suturam arcuatim plicatis, ultimo medio et infrà leviter plicato; aperturâ breviusculâ, pyriformi, columellâ infrà medium plicâ prominenti armatâ.*

THE HALF-PLAITED AURICULA. Shell thin, narrow, olive; spire attenuated, elongated; whorls arch-ridged above the suture, last smooth at the middle and below; aperture rather short, pyriform, columella armed with a prominent plait below the middle.

H. and A. ADAMS. MS. Brit. Mus.

Auricula sculpta. ?

Hab. Sandwich Islands, &c.

Distinguished by curved plaits or ridges on the upper part of the whorls.

Species 15. (Mus. Brit.)

AURICULA ELONGATA. *Aur. testâ subfusiformi, angustâ, [illegible]; spirâ [illegible], subproductâ; aperturâ angustâ, labio externo tenui, labio interno arcuato, infra medium unidentato, ad terminum truncato.*

THE ELONGATED AURICULA. Shell rather fusiform, narrow, smooth; spire conical, rather produced; aperture narrow, outer lip thin, inner lip arched, with a single tooth below the middle, truncated at the end.

PARREYS. —— ? MS. Mus. Brit.

Hab. Mediterranean.

Species 16. (Fig. *a*, *b*, Mus. Sowerby.)

AURICULA JUDÆ. *Aur. testâ solidâ, oblongo-cylindricâ, epidermide fuscâ, densè liratâ indutâ; spirâ productâ, obtusâ; aperturâ elongatâ, supra medium subcontractâ; labio interno valido, medio et infrà plicis duabus munito; labio externo lato, planato, supra medium tumido, versus suturam angulato et sinuato.*

THE JEWESS'S AURICULA. Shell solid, oblong-cylindrical, covered with a brown, closely-ridged epidermis; spire produced, obtuse; aperture elongated, rather contracted above the middle; inner lip strong, guarded with two teeth above the middle and below; outer lip broad, flattened, swelled above the middle, sinuous and angular towards the suture.

LINNÆUS. (Voluta auris Judæ.)

Hab. India.

Species 17. (Mus. Brit.)

AURICULA INCRASSATA. *Aur. testâ crassâ, angustâ, spirâ attenuatâ, productâ, anfractibus; subangulatis, ultimo cylindrico; aperturâ auriformi, medio sinuatim contracto, margine crassissimo, columellâ biplicatâ.*

THE THICKENED AURICULA. Shell thick, narrow, spire attenuated, produced; whorls slightly angular, last cylindrical; aperture auriform, sinuously contracted in the middle, margin very thick, columella with two plaits.

A. and H. ADAMS. MS. Brit. Mus.

Hab. —— ?

Species 18. (Mus. Brit.)

AURICULA HOOGLYENSIS. *Aur. testâ tenuiùsculâ, stramineâ, supernè conicâ, infrà subrotundâ; spirâ subpyramidatâ, anfractibus quaternis, rectilateralibus, ultimo cylindrico, supernè angulato; columellâ arcuatâ, infrà medium biplicatâ.*

THE HOOGLY AURICULA. Shell rather thin, straw-coloured, conical above, rather rounded; spire rather pyramidal, whorls four, straight-sided, last cylindrical, angular above; columella arched, with two plaits below the middle.

BLANFORD. —— ? MS. Brit. Mus.

Hab. Hoogly, India.

Species 19. (Mus. Brit.)

AURICULA LUTEA. *Aur. testâ ovatâ, pallidè fulvâ fusco-fasciatâ; spirâ brevi, conicâ, ultimo anfractu subcylindrico; aperturâ angustâ, labio externo intùs plicis numerosis munito; columellâ arcuatâ, triplicatâ.*

THE YELLOW AURICULA. Shell ovate, pale fawn banded with brown; spire short, conical, last whorl rather cylindrical; aperture narrow, outer lip provided with numerous plaits within; columella arched, with three plaits.

QUOY. Voy. Astro. Zoologie, Vol. II. p. 163.

Melampus pallescens. Sowerby.

Hab. —— ?

Species 20. (Mus. Brit.)

AURICULA OPARICA. *Aur. testâ tenui, angustâ, fusiformi, pallidè stramineâ; spirâ productâ, subacuminatâ, anfractibus elevatis, ultimo infrà subtruncato; aperturâ brevi, columellâ arcuatâ, infra medium uniplicatâ, ad terminum truncatâ.*

THE OPARA AURICULA. Shell thin, narrow, fusiform, pale straw; spire produced, rather acuminated; whorls raised, last slightly truncated below; aperture short, columella arched, with a plait below the middle, truncated at the end.

H. and A. ADAMS. —— ? MS.

Hab. Opara Isl., S. Seas.

Species 21. (Mus. Brit.)

AURICULA PUSILLA. *Aur. testâ parvâ, angustâ, albâ, spirâ acuminatâ, ultimo anfractu supra aperturam elevatâ, versus terminum subattenuatâ; aperturâ parvâ, columellâ biplicatâ.*

THE DWARF AURICULA. Shell small, narrow, white; spire acuminated, last whorl elevated above the aperture, slightly attenuated towards the end; aperture small, columella with two plaits.

H. and A. ADAMS. —— ? MS. Brit. Mus.

Hab. Philippines.

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G.B. Sowerby, del et lith.

Vincent Brooks, Day & Son, Imp.

AURICULA.

PLATE IV.

Species 22. (Mus. Sowerby.)

AURICULA DOLIOLUM. *Aur. testâ parvâ, ovatâ, griseâ, fusco-fasciatâ; spiraliter tenuiter sulcatâ; spirâ fuscâ, brevi, mucronatâ; aperturâ elongatâ, intùs castaneâ, columellâ infra medium prominenti, biplicatâ; labio externo lato, albo, planulato, ad medium unidentato.*

THE LITTLE TON AURICULA. Shell small, ovate, grey, banded with brown; spirally finely grooved; spire brown, short, mucronate; aperture lengthened, chestnut within; columella with two prominent plaits below the middle; outer lip broad, white, flattened, with a tooth at the middle.

PETIT. —— ? Proc. Zool. Soc. 1854, p. 31.

Hab. —— ?

Species 23. (Mus. Brit.)

AURICULA FRUMENTUM. *Aur. testâ fulvâ, subcylindricâ, solidiùsculâ; spirâ brevi, ultimo anfractu oblongo; labio interno latè expanso, tridentato, columellâ brevi, uniplicatâ, labio externo paulò incrassato.*

THE CORN AURICULA. Shell fawn, rather cylindrical, rather solid; spire short, last whorl oblong; inner lip broadly spread, three-toothed, columella short, with one plait, outer lip a little thickened.

PETIT. —— ? Proc. Zool. Soc. 1854, p. 11.

Hab. Lima.

Species 24. (Mus. Brit.)

AURICULA AVENA. *Aur. testâ parvâ, angustâ, pallidè fulvâ, leviter fasciatâ; spirâ productâ, acuminatâ; aperturâ supernè angustatâ, labio interno infra medium triplicato, columellâ uniplicatâ, labio externo ad medium subsinuato.*

THE WHEAT AURICULA. Shell small, narrow, pale fulvous, slightly banded; spire produced, acuminated; aperture narrow above, inner lip three-plaited below the middle, columella single-plaited, outer lip rather sinuous at the middle.

PETIT. —— ? Proc. Zool. Soc. 1854, p. 34.

Hab. —— ?

Species 25. (Mus. Brit.)

AURICULA FELIS. *Aur. testâ fuscâ, lævi, tenuissimè spiraliter striatâ; spirâ brevi, conicâ, ultimo anfractu infrà obliquè attenuato, prope terminum spiraliter carinato; aperturâ subovatâ, margine inflexo; latè planulato; labio externo supra medium profundè sinuato, medio expanso, denticulato, labio interno biplicato; columellâ plicâ bifidâ armatâ.*

THE CAT'S AURICULA. Shell brown, smooth, very finely spirally striated; spire short, conical, last whorl obliquely attenuated below, spirally keeled near the end; aperture subovate, margin bent inwards, broadly flattened, outer lip with a deep sinus above the middle, expanded and crenulated at the middle; inner lip with two plaits; columella armed with a bifid plait.

LAMARCK. Anim. s. Vert.

Bulimus auris-felis. Bruguière.

Hab. W. Indies.

Species 26. (Mus. Brit.)

AURICULA NUCLEUS. *Aur. testâ ovatâ, intensè fuscâ, tenuiter spiraliter sulcatâ; spirâ brevi, anfractibus convexis, ultimo breviùsculo, infrà spiraliter carinatâ, angustâ, infra carinam concavâ, labio interno biplicato, columellâ prominenti uniplicato, labio externo coffeo, lato, planato, supra medium prominenter expanso.*

THE NUT AURICULA. Shell ovate, deep brown, finely spirally grooved; spire short, whorls convex; last rather short, spirally keeled below, narrow; concave below the keel; inner lip with two plaits; columella with a prominent plait, outer lip coffee-coloured, broad, flattened, prominently expanded above the middle.

GMELIN. Linn. Syst. Nat.

Cassidula Cumingiana. Adams.

Hab. Manilla.

Species 27. (Mus. Sowerby.)

AURICULA COFFEA. *Aur. testâ ovatâ, fusco latè fasciato, tenuiter spiraliter striatâ; spirâ conicâ, brevi, ultimo anfractu angulato, infrà angustatâ, carinatâ; labio externo pallidè purpureo, supra medium prominenter lobato, columellâ biplicatâ.*

THE COFFEE AURICULA. Shell ovate, broadly banded with brown, finely spirally striated; spire conical, short, last whorl angular, narrowed below,

keeled; outer lip pale purple, prominently lobed above the middle, columella with two plaits.

Chemnitz. Conch. IX. t. 121, f. 5.

Hab. Mexico.

A shorter and more angular shell than *Auricula felis*.

Species 28. (Mus. Sowerby.)

Auricula angulata. *Aur. testâ conico-cylindricâ, griseo-fuscâ, ad angulum albo-fasciatâ; spirâ breviter conicâ, anfractibus acutè angulatis; labio externo pallidè carneo, planato; margine interno supra medium prominenter expanso; labio interno supra columellam biplicato, infrà expanso, concavo, plicâ duplicatâ armato.*

The angular Auricula. Shell conico-cylindrical, grey-brown, with a white band on the angle; spire shortly conical, whorls sharply angular; outer lip pale flesh, flattened; inner margin prominently expanded above the middle; inner lip with two folds above the columella, expanded below, concave, armed with a double plait.

Petit. Proc. Zool. Soc. 1854, p. 31.

Reeve. Conch. Syst. Auricula, Pl. LXXXVII. f. 5.

Hab. ——?

Species 29. (Mus. Sowerby.)

Auricula decussata. *Aur. testâ griseo-fuscâ, spiraliter sulcatâ, sulcis decussatâ; spirâ productâ, subacuminatâ, ultimo anfractu supernè rotundo, infrà carinato; aperturâ biangulatâ; labio interno biplicato; columellâ expansâ, uniplicatâ, labio externo supernè angulatim sinuato, supra medium plicâ acutè angulatâ prominenti armato.*

The decussated Auricula. Shell grey-brown, spirally grooved, grooves decussated; spire produced, slightly acuminated, last whorl rounded above, keeled below; aperture biangular; inner lip with two plaits; columella expanded, with a single plait, outer lip with an angular sinus above, armed above the middle with a sharply angular, prominent plait.

H. and A. Adams. —— ? MS. Brit. Mus.

Hab. —— ?

Species 30. (Mus. Brit.)

Auricula granifera. *Aur. testâ griseâ, conicâ, diris tenuissimis, striis decussatis, granifera; aperturâ angustâ, utrinque dentatâ.*

The granular Auricula. Shell grey, conical, grained by very fine ridges crossed by striæ; aperture narrow, toothed on each side.

Mousson. —— ? MS. Brit. Mus.

Hab. Near Cape Bedford.

Species 31. (Mus. Brit.)

Auricula turrita. *Aur. testâ elongatâ, turritâ, longitudinaliter tenuissimè plicatâ, epidermide stramineâ indutâ; spirâ elongatâ, anfractibus elevatis, supernè subangulatis, ad suturam crenulatis; aperturâ pyriformi; labio interno prominenter triplicato, labio externo latè incrassato.*

The turreted Auricula. Shell elongated, turreted, longitudinally very finely plaited, covered with a straw-coloured epidermis; spire elongated, whorls raised, rather angular above, crenulated at the suture; aperture pyriform, inner lip with three prominent plaits, outer lip broadly thickened.

Pfeiffer. Proc. Zool. Soc. 1854, p. 121.

Hab. Philippines.

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G.B. Sowerby, del. et lith.

Vincent Brooks Day & Son, Imp.

AURICULA.

PLATE V.

Species 32. (Mus. Sowerby.)

AURICULA KRAUSII. *Aur. testâ fusco-fumosâ, lævi, supernè tenuiter sulcatâ, ovatâ, spirâ pyramidatâ; ultimo anfractu infrà carinato; aperturâ angustâ, supernè subdepressâ, labio interno triplicato, labio externo lato, medio prominenter unidentato, supra medium angulatim sinuato.*

KRAUS'S AURICULA. Shell smoky brown, smooth, finely grooved above, ovate, spire pyramidal; last whorl keeled below; aperture narrow, somewhat depressed above, inner lip with three plaits, columella with three plaits, outer lip broad, middle with a prominent tooth, angularly sinuous above the middle.

KUSTER. Proc. Zool. Soc. 1854. p. 11.

Hab. —— ?

Species 33. (Mus. Sowerby.)

AURICULA PEPITA. *Aur. testâ obliquè ovatâ, fuscâ; spirâ breviusculâ, anfractibus tribus, rapidè crescentibus, ultimo magno; aperturâ patulâ, latâ, anticè obliquè productâ, columellâ rectiusculâ, dentibus duobus prominentibus albis armatâ.*

THE PIP AURICULA. Shell obliquely ovate, brown; spire rather short, whorls three, quickly increased, last large; aperture patulous, broad, anteriorly obliquely produced, columella rather straight, armed with two prominent white teeth.

KING. (*Marinula*). Zool. Journ. Vol. V. p. 344.

Auricula nigra. Philippi.

Hab. —— ?

Species 34. (Mus.—— ? Copied.)

AURICULA AUSTRALIS. *Aur. testâ ovatâ, pallidè olivaceâ, fusco longitudinaliter strigatâ, medio albo unifasciatâ, infrà spiraliter carinatâ; spirâ producti, obtusâ; aperturâ brevi ovatâ, columellâ biplicatâ, labio externo tenuiusculâ.*

THE AUSTRALIAN. Shell ovate, pale olive, longitudinally striped with brown, with a single white band in the middle, spirally keeled below; spire produced, obtuse; aperture short, oval, columella with two plaits, outer lip rather thin.

QUOY. Voy. Astr. Vol. II. p. 169. Pl. XIII. f. 34–38.

Hab. Australia.

Species 35. (Mus. Sowerby.)

AURICULA SULCULOSA. *Aur. testâ coffeâ, tenuissimè striatâ; spirâ breviusculâ, obtusâ, anfractibus rotundis; labio externo planulato, medio angulatim unidentato, supra medium sinuato, labio interno tenui, biplicato, columellâ latâ, concavâ, validè unidentatâ.*

THE SULCATED AURICULA. Shell coffee-coloured, very finely striated; spire rather short, obtuse, whorls rounded; outer lip flattened, with angular tooth at the middle, sinuous above the middle, inner lip thin, two-plaited, columella broad, concave, with one strong tooth.

MOUSSON. Journ. Conch. Paris.

Hab. Port Natal.

Resembles *Auricula decussatâ*, less angular and with the folds of the outer lip much less produced.

Species 36. (Mus. Sowerby.)

AURICULA SANDWICHENSIS. *Aur. testâ intensè fuscâ, medio albo cingulatâ, lævi, subcylindricâ, infrà leviter carinatâ, spirâ pyramidatâ, aperturâ brevi, labio interno biplicato; columellâ inconspicuè uniplicatâ.*

THE SANDWICH ISLAND AURICULA. Shell deep brown, with a white band in the middle, smooth, subcylindrical, slightly keeled below, spire pyramidal, aperture short, inner lip with two plaits; columella with an inconspicuous plait.

EDEYOUX.—— ? Proc. Zool. Soc. 1854. p. 34.

Auricula Browni. Philippi.

Hab. Sandwich Islands.

Species 37. (Mus. Brit.)

AURICULA BROTIANA. *Aur. testâ badiâ, griseo pallidè fasciatâ, ovatosubglobosâ, utrinque acuminatâ; aperturâ angustâ, dentibus prominentibus acutis utrinque armatâ, columellâ infrà uniplicatâ.*

BROT'S AURICULA. Shell bay, banded with pale grey, oval-subglobose, acuminated at each end; aperture narrow, armed on both sides with sharp, prominent teeth, columella with one plait below.

PFEIFFER.—— ? MS. Brit. Mus.

eylon.

Species 38. (Mus. Brit.)

AURICULA ZONATA. *Aur. testâ oblongâ, conicâ, luteâ, lævi, fusco-fasciatâ; spirâ pyramidali, breviùsculâ, ultimo anfractu obtusè angulato; aperturâ elongatâ, columellâ biplicatâ, labio externo tenuiùsculo, intùs maculato, transversè plicato.*

THE BANDED AURICULA. Shell oblong, conical, yellowish, smooth, banded with brown; spire pyramidal; rather short, last whorl obtusely angular; aperture elongated, columella with two plaits, outer lip rather thin, spotted inside, with transverse plaits.

MÜHLFELDT.—— ? MS. Brit. Mus.

Auricula monile. Lamarck.

Auricula fasciata. Deshayes.

Voluta flava. Gmel.

Auricula mustellina. Deshayes.

Hab. West Indies.

Species 39. (Mus. Sowerby.)

AURICULA QUOYI. *Aur. testâ parvâ, fusco fasciatâ, ovatâ, supernè acuminatâ; spirâ productâ, pyramidatâ; aperturâ breviùsculâ; columellâ biplicatâ, labio externo tenui.*

QUOY'S AURICULA. Shell small, banded with brown, ovate, acuminated above; spire produced, pyramidal; aperture rather short; columella with two plaits, outer lip thin.

A. ADAMS. (Laminodonta).

Hab. New Zealand.

Species 40. (Mus. Brit.)

AURICULA ORYZA. *Aur. testâ angustâ, fusiformi, lævi, albâ; spirâ elatâ, pyramidatâ; aperturâ parvâ, columellâ biplicatâ.*

THE RICE AURICULA. Shell narrow, fusiform, smooth, white; spire raised, pyramidal; aperture small, columella with two plaits.

H. & A. ADAMS—— ? MS. Brit. Mus.

Hab. —— ?

Species 41. (Mus. Brit.)

AURICULA NITIDULA. *Aur. testâ parvâ, nitenti, castaneâ, fasciatâ, fusiformi, angustâ, spirâ elatâ, subacuminatâ, ultimo anfractu infrà tumidiùsculâ; aperturâ angustâ, labio externo tenui, labio interno biplicato, columellâ arcuatâ, infrà truncatâ.*

THE NEAT LITTLE AURICULA. Shell small, shining, chestnut, banded, fusiform, narrow, spire raised, slightly acuminated, last whorl rather tumid below; aperture narrow, outer lip thin, inner lip with two plaits; columella arched, truncated below.

H. & A. ADAMS—— ? MS. Brit. Mus.

Hab. —— ?

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AURICULA.

PLATE VI.

Species 42. (Mus. Brit.)

AURICULA COSTELLARIS. *Aur. testâ olivaceâ-fuscâ, obliquè longitudinaliter costatâ, latâ, brevi; spirâ conicâ, ultimo anfractu breviter cylindrico, infrà carinato, infra carinam umbilicato; aperturâ angustâ, labio interno arcuato, triplicato.*

THE SMALL RIBBED AURICULA. Shell olive-brown, obliquely longitudinally ribbed, broad, short; spire conical; last whorl shortly cylindrical, keeled below, umbilicated below the keel; aperture narrow, inner lip arched, with three plaits.

H. & A. ADAMS. MS. Brit. Mus.

Hab. New Zealand

Species 43. (Mus. Brit.)

AURICULA GLOBULUS. *Aur. testâ brevi, ovato-globosâ, utrinque acuminatâ, olivaceâ, fasciatâ; aperturâ angustissimâ, semilunari; columellâ biplicatâ, labio externo tenuiùsculo.*

THE GLOBE AURICULA. Shell short, ovate-globose, acuminated at each end, olive, banded; aperture very narrow, semilunar; columella with two plaits, outer lip rather thin.

D'ORBIGNY—— ? MS. Brit. Mus.

Hab. S. America.

Species 44. (Mus. Brit.)

AURICULA STRIATA. *Aur. testâ parvâ, conicâ, coffeâ, spiraliter sulcatâ, supernè tenuiter longitudinaliter plicatâ; spirâ brevissimâ; anfractibus ad suturam crenulato-cristatis; ultimo infrà angusto, truncato; aperturâ angustâ, labio interno tenui, inconspicuè plicatâ, columellâ validè uniplicatâ, labio externo incrassato, supernè angulato.*

THE STRIATED AURICULA. Shell small, conical, coffee-coloured, spirally grooved, finely longitudinally plaited above; spire very short; whorls with a crenulated crest at the suture; last narrow below, truncated; aperture narrow, inner lip thin, inconspicuously plaited, columella with a strong plait, outer lip thickened, angular above.

PEASE—— ? MS. Brit. Mus.

Hab. South Sea Islands.

Species 45. (Mus. Sowerby.)

AURICULA SULCATA. *Aur. testâ subcylindricâ, intensè fuscâ, albo angustè trifasciatâ, supernè spiraliter liratâ, infrà crebrè sulcatâ; spirâ pyramidatâ, ultimo anfractu infrà obtusè carinato; aperturâ semiovatâ, labio interno biplicato, labio externo reflexo, albo, subincrassato.*

THE GROOVED AURICULA. Shell rather cylindrical, deep brown, with three narrow white bands, spirally ridged above, closely grooved below; spire pyramidal, last whorl obtusely keeled below; aperture half-oval, inner lip with two plaits, outer lip reflected, white, rather thickened

H. & A. ADAMS. MS. Brit. Mus.

Auricula Stutchburyi. Pfeiffer.

Hab. New Zealand.

Species 46. (Mus. Brit.)

AURICULA CINGULATA. *Aur. testâ subcylindricâ, utrinque acuminatâ, angustâ, castaneo-fasciatâ, spirâ fusco-nigrescenti, elevatâ, lateraliter convexiùsculâ; ultimo anfractu cylindrico; aperturâ, intùs dentatâ; labio columellari infrà sinuato, conspicuè uniplicato.*

THE BANDED AURICULA. Shell subcylindrical, acuminated at each end, narrow, banded with chestnut, spire blackish brown, raised, rather convex laterally; last whorl cylindrical; aperture toothed within; columellar lip sinuous below, with a conspicuous plait.

PFEIFFER. MS. Brit. Mus.

Melampus variabilis. Gassies.

Hab. Cuba, New Caledonia.

Species 47. (Mus. Brit.)

AURICULA TABOGENSIS. *Aur. testâ conicâ, fuscâ, solidâ, ventricosâ, lævi; spirâ breviter conicâ; ultimo anfractu infrà angustato, acuminato, columellâ validè biplicatâ, aperturâ angustâ, intùs transversè crebriplicatâ.*

THE TABOGIS AURICULA. Shell conical, brown, solid, ventricose, smooth; spire shortly conical; last whorl narrow below, acuminated, columella

with two strong plaits, aperture narrow, closely transversely plaited within.

C. B. ADAMS. Zool. Proc. 1854. p. 9.

Hab. Jamaica.

Species 48. (Mus. Brit.)

AURICULA UMLASSIANA. *Aur. testâ conicâ, latissimâ, olivaceâ, pallidè fusco-fasciatâ; spirâ brevissimâ, subplanulatâ, ultimo anfractu infrà angustissimâ; labio interno infrà uniplicatô; columellâ uniplicatâ; labio externo intùs multiplicato.*

THE UMLASSIAN AURICULA. Shell conical, very broad, olive, banded with pale brown; spire very short, rather flat, last whorl very narrow below; inner lip with one plait below, columella with one plait; outer lip numerously plaited within.

KRAUSS—— ? MS. Mus. Brit.

Hab. S. Africa.

Species 49. (Mus. Brit.)

AURICULA COSTATA. *Aur. testâ castaneâ, brevi, ovatâ, longitudinaliter costatâ, costis obliquis, undulatis, spirâ conicâ, anfractibus ad suturam cristatis; aperturâ semiovatâ, margine crassissimo, labio interno rectiùsculo, margine quinque-plicato; labio externo supernè angulatim subsinuato.*

THE RIBBED AURICULA. Shell chestnut, short, ovate, longitudinally ribbed, ribs oblique, undulated, spire conical, whorls crested at the suture; aperture half-oval, margin very thick, inner lip rather straight; margin with five plaits; outer lip rather angularly sinuous above.

QUOY. Voy. Astrolabe. Proc. Zool. Soc. 1854.

Hab. Isl. Masbate, Philippines.

Species. 50. (Mus. Brit.)

AURICULA GUNDLACHI. *Aur. testâ subconicâ, obtusè-angulatâ, pallidâ, fasciis castaneis interruptis pictâ; spirâ brevissimâ, ultimo anfractu infrà subtruncato; aperturâ angustâ, intùs multiplicatâ; labio interno biplicato.*

GUNDLACH'S AURICULA. Shell rather conical, obtusely angular, pale, painted with interrupted chestnut bands; spire very short, last whorl slightly truncated below; aperture narrow, numerously plaited within; inner lip with two plaits.

PFEIFFER. MS. Brit. Mus.

Hab. Cuba.

Species 51. (Mus. Brit.)

AURICULA OLIVACEA. *Aur. testâ convexo-conicâ, olivaceâ, griseo-fasciatâ, fasciis strigatis; spirâ brevissimâ, ultimo anfractu ventricoso, supernè angulato, infrà angustato; labio interno biplicato; labio externo intùs multiplicato, ad marginem densè castaneo.*

THE OLIVE AURICULA. Shell convexly conical, olive, banded with grey, bands striped; spire very short, last whorl ventricose, angular above, narrow below; inner lip with two plaits; outer lip many-plaited within, deep chestnut at the margin.

CARPENTER. MS. Brit. Mus.

Hab. California.

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G.B. Sowerby del et Lith

AURICULA.

PLATE VII.

Species 52. (Mus. Brit.)

AURICULA REDFIELDI. *Aur. testâ parvâ, conicâ, obtusè angulatâ, infrà obliquè subtruncatâ, albidâ, castaneo interruptim fasciatâ; aperturâ angustissimâ, intùs seriatim plicatâ; labio interno uniplicato; columellâ uniplicatâ.*

REDFIELD'S AURICULA. Shell small, conical, obtusely angular, obliquely subtruncated in front, whitish, with interrupted chestnut bands; aperture very narrow, plaited in rows within, inner lip single-plaited, columella single-plaited.

PFEIFFER. MS. Brit. Mus.

Hab. Bermuda.

Species 53. (Mus. Brit.)

AURICULA CAFFRA. *Aur. testâ ovato-conicâ, olivaceo-fuscâ, concolori vel fasciatâ; spirâ brevissimâ; ultimo anfractu ad suturam subcristato, infrà post columellam concavo; columellâ uniplicatâ; aperturâ intùs validè plicatâ.*

THE CAFFER AURICULA. Shell ovately-conical, olive-brown, uniform or banded; spire very short; last whorl somewhat crested at the suture, concave below, behind the columella; columella with one plait, aperture with strong plaits within.

KÜSTER. Conch. p. 36, Pl. V. f. 6.

Auricula ater. Mühlfeldt.

Hab. S. Africa.

Species 54. (Mus. Brit.)

AURICULA BIDENTA. *Aur. testâ ovato-conicâ, obtusâ, olivaceâ, interruptim pallidè trifasciatâ; spirâ brevi, conicâ, ultimo anfractu supernè obtusè angulato, infrà acuminato; aperturâ angustâ, intùs edentulâ, labio interno bidentato.*

THE DOUBLE-TOOTHED AURICULA. Shell ovate-conical, obtuse, olive, with three pale interrupted bands; spire short, conical; last whorl obtusely angular above; acuminated below; aperture narrow, without teeth inside, inner lip with two teeth.

SAY. Invertebrata of Massachusetts.

Auricula cornea. Deshayes.

Hab. N. America.

Species 55. (Mus. Brit.)

AURICULA CRISTATA. *Aur. testâ subcylindricâ, pallidè castaneâ; spirâ brevissimâ, ultimo anfractu ad suturam elevatâ, tumidâ, infrà spiraliter tumidâ; aperturâ angustâ, labio interno triplicato, infrà concavo, ad terminum subtruncato.*

THE CRESTED AURICULA. Shell rather cylindrical, pale chestnut; spire very short, last whorl raised at the suture, tumid, spirally tumid below; aperture narrow, inner lip with three plaits, concave below, rather truncated at the end.

PFEIFFER. MS. Brit. Mus.

Hab. Philippines.

Species 56. (Mus. Brit.)

AURICULA BOREALIS. *Aur. testâ conicâ, lævi, pallidè fulvo fasciatâ; spirâ elevatâ, conicâ, ultimo anfractu obtusissimè angulatâ, prope terminum angustè carinato, labio interno prope medium uniplicato, columellâ infrà uniplicatâ; labio externo incrassato.*

THE BOREAL AURICULA. Shell conical, smooth, banded with pale brown; spire elevated, conical, last whorl very obtusely angular, narrowly keeled near the end, inner lip with a single plait near the middle, columella with a single plait below; outer lip thickened.

CONRAD. (Melampus.)

Hab. North America.

Species 57. (Mus. Sowerby.)

AURICULA CONIFORMIS. *Aur. testâ conicâ, luteâ, griseo-olivaceo latè fasciatâ; spirâ brevi, ultimo anfractu obtusè angulato, infrà acuminato, columellâ uniplicatâ; aperturâ intùs seriatim plicatâ, labio externo tenui, intùs fasciatâ.*

THE CONE-SHAPED AURICULA. Shell conical, yellow, broadly banded with olive-grey; spire short, last whorl obtusely angular, acuminated below, columella with one fold; aperture with a row of teeth inside, outer lip thin, banded within.

LAMARCK. Anim. s. Vert.

Voluta minuta. Gmel.

Hab. Barbadoes.

Species 58. (Mus. Brit.)

AURICULA LIVIDA. *Aur. testâ obesâ, subconicâ, griseo-olivaceâ; spirâ brevissimâ, anfractibus maculatis, ultimo infrà subtruncatâ, post columellam concavâ; aperturâ utrinque denticulatâ.*

THE LIVID AURICULA. Shell stout, rather conical, olive-grey, spire very short, whorls spotted, last subtruncated below, concave below the columella; aperture toothed on both sides.

LINNÆUS. Syst. Nat.

Auricula Liberiana? Adams.

Hab. —— ?

Species 59. (Mus. Brit.)

AURICULA PANAMAENSIS. *Aur. testâ elongatâ, fusiformi, intensè fuscâ, lævi, infrà tumidiùsculâ; spirâ productâ, anfractibus quaternis, ultimo oblongo; aperturâ auriformi, infrà subexpansâ, medio contractâ; labio externo ad medium sinuato; labio interno quadriplicato, columellâ infrà rectiùsculâ.*

THE PANAMA AURICULA. Shell elongated, fusiform, deep brown, smooth, rather tumid below; spire produced, whorls four, last oblong; aperture auriform, rather expanded below, contracted in the middle; outer lip sinuous in the middle, inner lip with four plaits; columella rather straight.

C. B. ADAMS. Shells of Jamaica.

Hab. Jamaica.

Species 60. (Mus. Brit.)

AURICULA PYRIFORMIS. *Aur. testâ conicâ, subattenuatâ, spirâ brevi, subrotundâ, ultimo anfractu olivaceo pallidè maculato, infrà attenuato, acuminato, columellâ conspicuè biplicatâ.*

THE PYRIFORM AURICULA. Shell conical, rather attenuated, spire short, rather rounded, last whorl olive with pale spots, attenuated below, acuminated, with two conspicuous plaits.

PETIT. Proc. Zool. Soc. 1842, p. 202.

Hab. Tumaio, West Columbia.

Species 61. (Mus. Brit.)

AURICULA DENTICULATA. *Aur. testâ fulvâ, fusiformi; spirâ elongatâ, pyramidatâ, ultimo anfractu ventricoso, ovato, labio columellari conspicuè triplicato, labio externo intùs incrassato, obtusè bidentato.*

THE TOOTHED AURICULA. Shell fulvous, fusiform; spire elongated, pyramidal, last whorl ventricose, ovate; columellar lip conspicuously three-plaited, outer lip thickened within, with two conspicuous teeth.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLII. f. 4, 5.

Hab. Bermuda.

Species 62. (Mus Brit.)

AURICULA SIAMENSIS. *Aur. testâ obtusè conicâ, castaneo quadrifasciatâ; spirâ breviùsculâ, ultimo anfractu supernè obtusè angulato, infrà subtruncato; aperturâ intùs fasciatâ, columellâ conspicuè biplicatâ; labio externo incrassato.*

THE SIAMESE AURICULA. Shell obtusely conical, with four chestnut bands; spire rather short; last whorl obtusely angular above, slightly truncated below; aperture banded within; columella conspicuously two-plaited; outer lip thickened.

MARTENS. MS. Brit. Mus.

Hab. Siam.

Species 63. (Mus. Brit.)

AURICULA MITRALIS. *Aur. testâ olivæformi, angustâ, lævi; spirâ elevatâ, obtusâ, convexiùscula; ultimo anfractu cylindrico, pallidè fusco, supernè maculato; aperturâ pyriformi, infrà rotundâ, columellâ brevi, rectâ, uniplicatâ.*

THE MITRE-LIKE AURICULA. Shell olive-shaped, narrow, smooth; spire raised, obtuse, rather convex, last whorl cylindrical, pale brown, spotted above; aperture pyriform, round below; columella short, straight, with one plait.

ADAMS. MS. Brit. Mus.

Hab. Mogadore.

AURICULA.

	Plate.	Species.
angulata, *Petit.*	IV.	28
ater, Mühlfeldt.	VII.	53
Australis, *Quoy.*	V.	34
avena, *Petit.*	IV.	24
bidentata, *Say*	VII.	54
borealis, *Conrad.*	VII.	56
Bronni, Philippi.	V.	36
Brotiana, *Pfeiffer*	V.	37
Caffra, *Küster.*	VII.	53
Ceylonica, *A. Adams.*	II.	5
Chinensis, *Pfeiffer*	II.	11
cingulata, *Pfeiffer*	VI.	46
coffea, *Chemnitz.*	IV.	27
coniformis, *Lamarck.*	VII.	57
cornea, Desbayes	VII.	54
costata, *Quoy.*	VI.	49
costellaris, *H. & A. Adams*	VI.	42
cristata, *Pfeiffer.*	VII.	55
Cumingiana? Adams.	IV.	26
decussata *Adams*	IV.	29
denticulata, *D'Orbigny.*	VII.	61
doliolum, *Petit*	IV.	22
Dunkeri, *Pfeiffer*	II.	9
elongata, *Parreys*	III.	15
felis, *Lamarck*	IV.	25
frumentum, *Petit*	IV.	23
Gangetica, *Benson.*	II.	4
globulus, *D'Orbigny*	VI.	43
Gundlachi, *Pfeiffer*	VI.	50
Quoyi, *A. Adams*	V.	39
helvacea, *Philippi.*	II.	7
Hoeglyensis, *Blanford*	III.	18
incrassata, *Adams.*	III.	17
Judæ, *Linnæus*	III.	16
Kraussii, *Küster*	V.	32
Liberiana, Adams.	VII.	58
livida, *Linnæus*	VII.	58
lutea, *Quoy.*	III.	19
malchi, *Müller*	I.	2
Midæ, *Linnæus.*	I.	1
minuta, Gmelin.	VII.	57
mitralis, *Adams.*	VII.	63
nigra, Philippi	V.	33
nitidula, *H. & A. Adams*	V.	41
nucleus, *Gmelin.*	IV.	26
olivacea, *Carpenter*	VI.	51
oparica, *Adams*	III.	20
oryza, *A. Adams.*	V.	40
paliescens, *Petit.*	II.	10
Panamaensis, *C. B. Adams*	VII.	59
pellucens, Sowerby	III.	19
pepita, *King*	V.	33
pusillæ, *Adams.*	III.	21
pyriformis, *Petit*	VII.	60
granifera, *Mousson*	IV.	30
Redfieldi, *Pfeiffer*	VII.	52
saccata, *Pfeiffer.*	III.	13
Sandwichensis, *Edyoux.*	V.	36
sculpta—— ?.	III.	14
semiplicata, *H. & A. Adams.*	III.	14
semisculpta, *A. Adams.*	II.	8
Siamensis, *Martens.*	VII.	62
stagnalis, *D'Orbigny.*	II.	3
striata, *Pease.*	VI.	44
subula, *Quoy.*	II.	12
sulcata, *H. & A. Adams*	VI.	45
sulculosa, *Mousson*	V.	35
Tabogensis, *C. B. Adams.*	VI.	47
tornatelliniformis, *Petit*	II.	5
turrita, *Pfeiffer*	IV.	31
Umlassiana, *Krauss*	VI.	48
variabilis, Gassies.	VI.	46
zonata, *Mühlfeldt*	V.	38

INDEX TO VOLUMES

SHOWING IN WHICH VOLUME EACH GENUS WILL BE FOUND.

The Genera marked * are Land Shells, those marked † are Freshwater, the remainder are Marine.

Genera	Plates	Vol.
*Achatina	23	5
*Acme	6	6
*Adamsiella	2	14
Adeorbis	2	19
Akera	1	16
*Alycæus	6	20
Amphidesma	7	8
†Ampullaria	28	10
*Anastoma	1	14
Anatina	4	14
Anatinella	1	19
Ancillaria	12	15
†Anculotus	6	12
†Ancylus	3	20
†Anodon	37	17
Anomia	8	13
Arcotrum	1	16
Aplysia	10	17
Arca	17	2
Argonauta	4	12
Artemis	10	6
Aspergillum	4	12
Astarte	3	19
Ate	5	17
†*Auricula	7	20
Avicula	18	10
†Bartelettia and Mulleria	1	18
Broderipia	1	19
Buccinum	14	3
*Bulimus	89	5
Bulla	6	16
Bullia	4	3
Bullina	1	18
Calyptræa	8	11
Cancellaria	18	10
Capsa	1	10
Capsella	2	10
Cardilia	1	19
Cardita	9	1
Cardium	22	2
Carinaria	1	15
Cassidaria	1	5
Cassis	12	5
†Castalia	3	17
Cemoria	1	19
†Cerithidea	4	15
Cerithium	20	15
Chama	9	4
Chamostrea	1	14
†Chilina	3	19
Chiton	33	4
Chlamydonellus	1	4
*Chondropoma	11	14
Circe	10	14
*Clausilia	17	20
Clavagella	3	18
Columbella	37	11
Concholepas	2	14
Conus	56	1
Corbis	1	18
Corbula	5	2
Crania	1	13
Cranopsis and Zeidora	1	19
Crassatella	3	1
Crenatula	2	11
Crepidula	5	11
Crucibulum	7	11
Cucullæa	1	17
Cultellus	7	19
Cumingia	2	1
*Cyclophorus	20	15
*Cyclostoma	23	13
Cyclostrema	3	19
*Cyclotus	9	14
*Cylindrella	16	20
Cymbium	26	13
Cypræa	27	3
Cypricardia	2	1
Cyprina	1	19
†Cyrena	19	20
Cytherea	10	14
Delphinula	5	1
Dentalium	7	18
Dione	12	14
Dolabella	2	16
Dolabrifera	1	16
Dolium	8	5
Donax	9	8
Eburna	1	5
Eglisia	1	5
Emarginula	9	19
Erato	3	15
†Etheria	2	18
Eulima	6	15
Fasciolaria	7	4
Ficula	1	4
Fissurella	16	6
Fistulana	1	20
Fusus	21	4
†Galatea	6	16
Galeomma	1	19
Gastrochæna	4	20
Gena	2	19
†Glauconome	1	2
Glycimeris	1	19
Gnathodon	1	19
Halia	1	14
Haliotis	17	3
Haminea	5	16
Harpa	4	1
*Helicina	34	19
*Helix	210	7
Hemipecten	1	6
†Hemisinus	6	12
Hinnites	1	8
Hippopus	1	14
Hydatina	2	16
†Hyria	5	17
Ianthina	5	11
†Io	3	12
†Iridina	2	16
Isocardia	1	2
Kuphus	1	20
Lædia	9	18
†Lampania	2	15
Latia	1	9
Leiostraca	3	15
*Leptopoma	8	13
Lima	5	18
†Limnæa	15	18
Lingula	2	13
Linteria	1	18
Lithodomus	5	10
Littorina	18	10
Lucina	11	6
Lutraria	5	8
Mactra	21	8
Magilus	4	18
Malleus	3	11
Mangelia	8	3
Margarita	3	20
Marginella	27	15
*Megaspira	1	19
*Melania	59	12
†Melanopsis	3	12
†Melatoma	3	12
Meroe	3	14
Mesalia and Eglisia	1	5
Mesodesma	4	8
Meta	1	11
Mitra	39	2
Modiola	11	10
Monoceros	4	3

Genera	Plates	Vol.
†Mulleria	1	18
Murex	37	3
Mya	3	20
Myadora	1	2
Mycetopus	4	16
Myochama	1	12
Mytelimeria	1	20
Mytilus	11	10
Nassa	29	8
Natica	30	9
Nautilus	6	12
Navia	1	20
†Navicella and Latia	8	9
Neilo	1	18
Nerita	19	9
†Neritina	37	9
Neritopsis	1	20
Niso	1	15
Nucula	5	18
Oliva	30	6
Oniscia	1	5
Orbicula	1	13
Ostræa	33	18
Ovulum	14	15
†Paludina	11	14
†Paludomus	3	4
Pandora	3	19
Panopæa	6	19
*Partula	4	6
Patella	42	8
Pecten	35	8
Pectunculus	9	1
Pedicularia	1	20
Pedum	1	11
Perna	6	11
Petricola	3	19
Pharus	1	19
Phasianella	6	13
Philine	2	18
Pholadomya	1	18
Pholas	12	18
Phorus	3	1
†Physa	12	19
Pinna	34	11
†Pirena	2	12
Placuna	5	18
Placunanomia	3	11
Planaxis	5	20
†Planorbis	14	20
†Pleiodon	1	16
Pleurobranchus	1	17
Pleurotoma	40	1
Pleurotomaria	1	19
Plicatula	4	19
†Potamides	1	15
Psammobia	8	10
Psammotella	1	10
Pterocera	6	6
*Pterocyclos	5	14
Pterpoda	6	20
*Pupa	20	20
*Pupinidæ	10	20
Purpura	13	3
Pyramidella	6	15
†Pyrazus	1	15
Pyrula	9	4
Ranella	8	2
Ricinula	6	3
Rimula	1	19
Rissoa	13	20
Rostellaria	3	6
Rotella	4	20
Rhynchonella	1	13
Sanguinolaria	1	10
Saxicava	2	20
Scalaria	16	19
*Scarabus	3	12
Scaphander	1	18
Scintilla	6	19
Scutus	2	17
Sigaretus	5	15
Siliquaria	4	20
Simpulopsis	2	13
Siphonaria	7	9
Solarium	3	15
Solecurtus	8	19
Solemya	1	20
Solen	7	19
Solenella and Neilo	1	18
Soletellina	4	16
Sphærium	5	20
Spondylus	18	9
Stomatella	5	19
Stomatia	2	19
Strombus	19	6
Struthiolaria	1	6
Stylifer	2	20
†Succinea	12	18
Tapes	13	14
Teinostoma	1	19
†Telescopium	1	15
Tellina	56	17
Terebra	27	12
Terebellum	1	14
Terebratula and Rhynchonella	11	13
Teredo	4	20
Thracia	3	12
Tornatella	4	15
Trichotropis	2	19
Tridacna	8	14
Trigonia	1	12
Triton	20	2
Trochita	3	11
Trochus	16	13
Tugalia	1	17
Tugonia	1	14
Turbinella	[illegible]	4
Turbo	[illegible]	4
Turritella	[illegible]	5
*Tympanotonus	[illegible]	15
Typhis	[illegible]	19
Umbrella	[illegible]	11
Unio	[illegible]	16
Unimerus	[illegible]	18
Vanicoro and Neritopsis	[illegible]	20
Vermetus	1	20
Venerupis	[illegible]	19
Vendo	3	14
*Vertagus	5	15
*Vitrina	10	13
Voluta	2	6
Vulsella	2	11
Yuldia	5	18
Zebrina	1	19
Zizyphinus	8	14
Zylothaga and Navea	1	20

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